2: Stefansson--70 (1908-1912) 1914 Copper Eskimo
116, 412, 354

"Clubs or mallets of musk-ox horn are used for pounding blubber before it is put in the lamp so the oil may run out more freely."

2: Stefansson--98-99 (1908-12) 1914 Copper Eskimo
116, 411, 412

"The copper snow knives, and the iron ones, if the material allows it, have [99] a broad, double-edged spear blade six to twelve inches long, mounted on a handle of caribou long enough to easily accommodate the two mittened hands of the man who uses it, or a handle from seven to ten inches long. The handle is wound with split roots of the small arctic willow. It flares at the end into a thin, kidney-shaped widening. One side of this kidney-shaped spade is perforated and a string attached for tying the knife fast to the bow case in summer, when it is used as a hunting and skinning knife. The sheath for the knife is separately tied to the bow case, so that the knife lies horizontally when the bow and quiver are slung across the hunter's back. In winter the knife is carried in the sled, or held in the hand."

2: Stefansson--99-101 (1908-12) 1914 Copper Eskimo
116, 412, 174

"The two things of perhaps the greatest interest about the knives are: (a) that the knives are always sharpened not only on both sides the blade, but each edge is sharpened from both sides, as white men sharpen a knife, while from the Baillie Islands west to the Yukon mouth, both on the coast and inland, Eskimo sharpen knives of all sizes on one side the edge only, or in the manner in which we sharpen scissors. Coronation Gulf and Victoria Island people sharpen only the [101] crooked knife, scissor fashion. (b) The fidelity with which the shape of the copper knives is copied in the iron knives whenever the character of the material allows fidelity. If the blade as a whole cannot be coerced into shape, the peculiar local type of point will at least be given it; the same point as is found on all their arrows, spears, and lances. This type of point is not familiar to me from farther west, where the blade of any butcher knife is soon filed into the type shown in Fig. 45. It is to be expected that in knives as well as other things closer affinities will be found to the east than to the west, for our discussion goes to show that not only in the recent past, but also in the more distant past, relations with the east have been more continuous and probably more friendly."

2: Stefansson--102 (1908-12) 1914 Copper Eskimo
116, 372, 412

"The three-piece drill, bowdrill, or firedrill is here what it is elsewhere, practically. The bow is usually one of the long ribs of a musk-ox, and the mouth-piece often the bone from the hock-joint of a caribou, and the stem of the drill of antler, musk-oxen, or bear bone, the point most often of iron but occasionally of copper. For drilling the eyes of needles, the drill point is usually a fragment of a broken needle."

2: Stefansson--231 (1908-12) 1914 Copper Eskimo
326, 412, 117

"May 14. Use of Copper. There is probably not a single copper implement here, though some ulus etc., are nailed with copper rivets.

Iron Implements. Their iron comes from the 'Uallirrmiut,' whose location is not yet clear to me. They have iron pots, frying pans, snow knives, etc. The knives are all made by themselves, apparently."

2: Stefansson--233 (1908-12) 1914 Copper Eskimo
412, 117

"Needles. The needles I have seen are all made by Eskimo. They are of the 'glover's' type and vary in size from darning needles to 'glovers No 3.' Some have a smaller eye than 'glovers No. 3'."

2: Stefansson--267-268 (1908-12) 1914 Copper Eskimo
117, 412

"The Copper Eskimo have repeatedly told me the cheap butcher knives I brought for trade are fine knives because they bend easily. My own knife [268] none of them care for because it will not bend. Hodgson says the Porcupine and Yukon Indians had exactly the same test for the goodness of a knife. At Barrow and Mackenzie, now at least, they will not have a knife if it bends. They don't like anything lighter than a Wilson nine-inch blade (at Barrow at least), which they cut down with a file to seven inch to give it point."

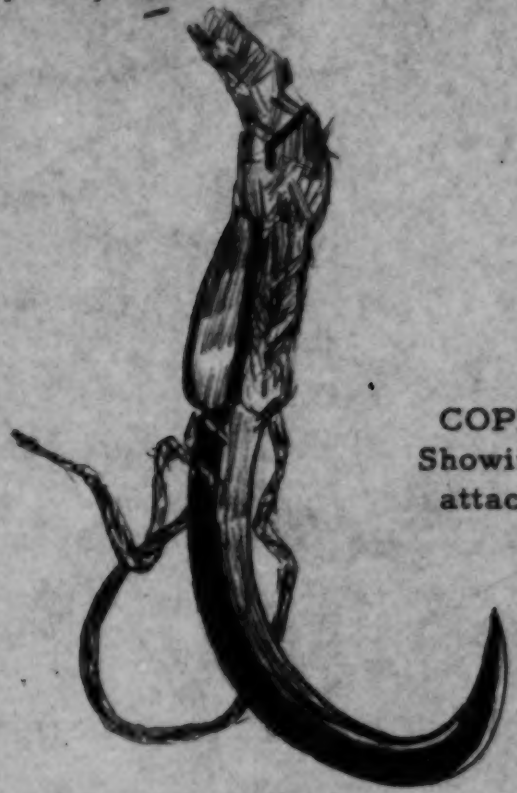


PLATE III
COPPER FISH-HOOK
Showing a portion of the attached sinew line.

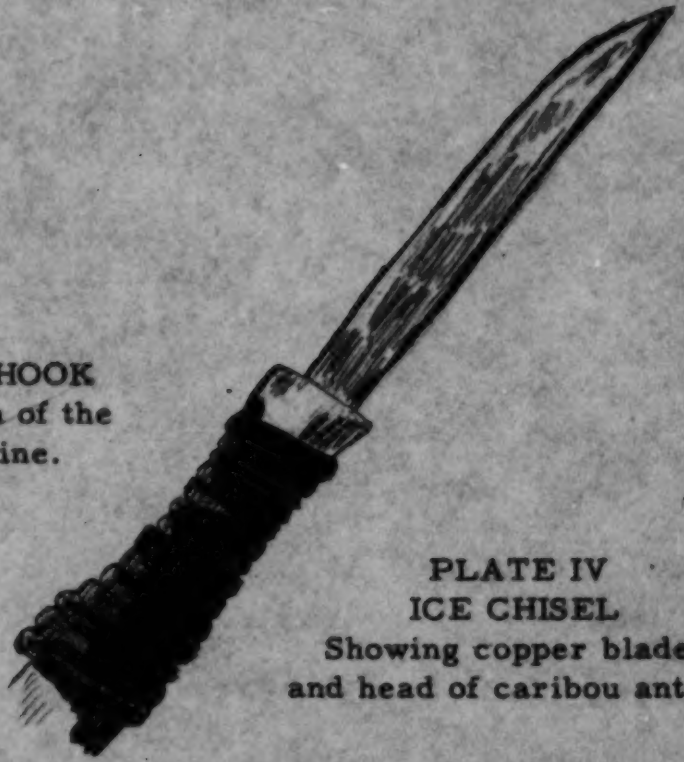


PLATE IV
ICE CHISEL
Showing copper blade and head of caribou antler.

8: Cadzow--12-13 (1919) 1920 Copper Eskimo
116, 412

"Ice Chisels.--Pl. IV illustrates a copper-bladed ice chisel used to chop holes in the ice for fishing, or for enlarging seal-holes. The chisel is mounted on a heavy wooden shaft, about 6 ft. long and beveled at the [13] end. It is attached by placing the beveled end of the antler head on the beveled end of the shaft and pegging them together, the junction being wrapped with a sealskin thong.

The blade here shown is attached to the antler head by being driven into the pith of the antler when green, and allowed to dry. The shrinking of the antler grips the blade, which is serrated on the edges that enter the head.

Length of blade, 6 in.
Length of head, 5 1/2 in."

8: Cadzow--13-14 (1919) 1920 Copper Eskimo
116, 412

"Snow Knives.--Pl. V represents three double-edged, paddle-shaped knives, with copper blades. This type of knife is used in making snow houses, and is indispensable in winter. It is carried at all times by the men in a sheath attached to the bow-case, on the sled or in the hand, for they do not know at what moment they may be obliged to build a snow-house for protection from a severe Arctic storm.

The copper blade shown in a is mounted in a wooden handle, and held in place with [14] strands of sinew passed around a groove in the handle and tied. The blade represented in b is mounted in an antler handle which has a crescentic guard riveted to the near end for the purpose of preventing the handle from slipping while the knife is in use. The handle is wrapped with a strip of split willow to strengthen it and enable the user to obtain a firm grip with his mittened hand. The blade shown in c is mounted in an antler handle composed of two pieces beveled and fastened together with three copper rivets, one of them passing through the blade to hold it in place on the handle, around which sealskin thongs are wrapped.

(a) Length of blade, 11 1/2 in.
Width at center, 2 1/2 in.
Length of handle, 2 1/2 in.

(b) Length of blade, 8 in.
Width at center, 7/8 in.

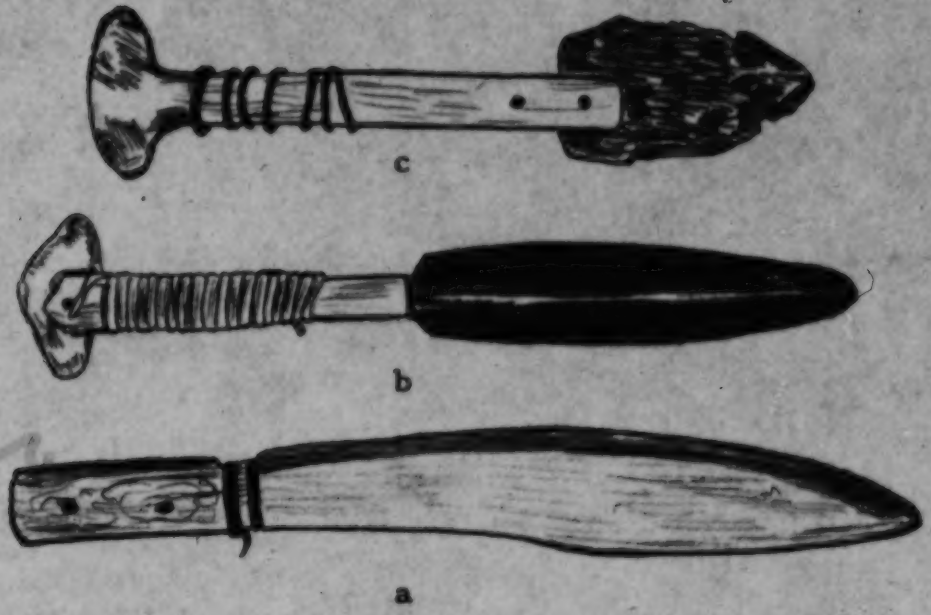
Length of handle, including guard, 7 1/4 in.
(c) Length of blade, 4 1/2 in.
Width at center, 2 1/2 in.
Length of handle, 9 1/2 in."

a b

PLATE VI--ULUS, OR WOMEN'S KNIVES

a, Made of a solid piece of copper, with a wooden grip. b, Copper blade attached to an antler shank with copper rivets, and with an antler grip.

PLATE V



c

b

a

[AW: Following are the legends for Plate V]

SNOW KNIVES WITH COPPER BLADES

a, Rare type; the blade is mounted in a wooden handle. b, Common type; the blade is mounted in an antler handle and the crescentic guard is held in place with a copper rivet. c, Common type; the roughly-shaped blade is secured in the handle with a copper rivet.

8: Cadzow--14-15 (1919) 1920 Copper Eskimo
116, 412

"Ulus, or Women's Knives.--The copper-bladed ulu is essentially a woman's knife, [15] used in cutting skin for clothing. The hide is placed on a board, an incision is made with one end of the blade, and the skin cut with a forward motion of the wrist. The ulu is also used for carving and chopping meat and fish. The fan-shaped blade and shank represented in pl. vi, a, is made of a solid piece of flattened copper, the shank passing through the wooden grip and held in place with a copper wedge. In b is shown a blade attached to the antler shank with copper rivets. The shank passes through the antler grip, where it is held in place with a copper wedge. If the blade is made of a separate piece of metal, the shank to which it is attached is made flat in order that it will not interfere with the depth of the cut into food.

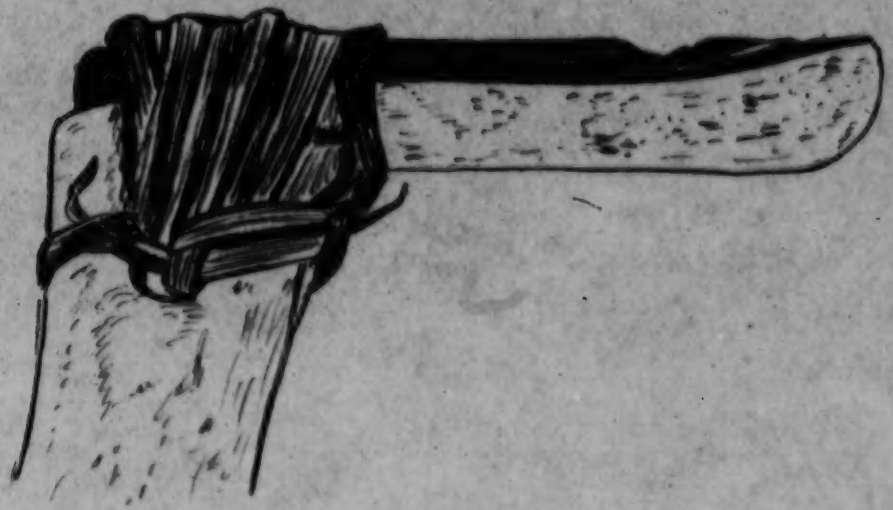
(a) Length from grip to cutting edge, 4 1/2 in.
Cutting edge, 4 1/2 in.

(b) Length from handle to cutting edge, 3 in.
Cutting edge, 3 1/2 in."

8: Cadzow--15-16 (1919) 1920 Copper Eskimo
116, 412

"Adze.--The copper-bladed adze used by [16] the Copper Eskimo is primarily a wood-working tool. Snow-shovels, lamp-boards, dishes, bows, and other articles are roughly blocked out with it, then finished with a crooked knife. Frozen meat and fish are also chopped with this useful implement. The blade of the adze illustrated in pl. viii is secured to the curved antler handle with thongs of sealskin passed around it and through a hole in the helve, holding the flat face of the blade against the end of the handle.

Length of blade, 7 in.
Width at cutting edge, 2 1/2 in., tapering to
1 in. at the opposite end.
Length of handle, 13 in."



PL. VIII--ADZE WITH BLADE OF NATIVE COPPER AND HANDLE OF ANTLER

11: Stefansson--293-294 (1908-1912) 1913 Copper Eskimo
116, 135, 511, 412

"Honesty seems on a higher level among...[JMR: i.e. the Prince Albert Sound people] than among any other people we have seen except the Akuliakattagmiut and Haneragmiut. Their clothes are far the best, their tents the largest. They use far more copper than any other people--doubtless because it is more abundant [in their country]. [294] The Kogluktogmiut [of the Coppermine River] are very eager for metal rods for the middle piece of the seal spear. They never make any of copper, no doubt because copper is too scarce. Their ice picks are small: their seal hole feelers are all of horn or iron. In the Sound [on the other hand] the copper ice picks are in some cases three-quarters by one and a quarter inch and fifteen inches long. Most seal spears have middle pieces of copper--the rest have iron [from M'Clure's ship?]. The seal hole feelers are most [of them] of copper. Some of their tent sticks are of local driftwood, some are round young spruce which they get from the Puiblirmiut who get them from our neighbors of last August. Some sleds come from Dease River; some from Cape Bexley, but in either case they have been bought of the Puiplirgmiut or the Haneragmiut. Their stone pots are said to be all from the Urkusiksialik or Kogluktualuk (Tree River). Some they got from the Puiplirgmiut by the road Natkusiak and I came last week, some around the point [Cape Baring] from the Haneragmiut by the road we are taking now. Their fire stones [iron pyrite for striking fire] are some from the Haneragmiut, some picked up in the mountains north of the Sound. The copper is all from the mountains northest of

the bottom of the Sound. They say some [detached] pieces of pure copper [in those mountains] are as high as a man's shoulder and as wide as high; others project out of the hill-side and are of unknown size."

12: Collinson--284-285 (1851-53) 1889 Copper Eskimo

116, 226, 412, 146, 261

"Fish appeared to be the staple article of food, which both the sea and the lakes afforded in abundance; they are caught with copper hooks, or speared through holes in the ice, or from stone piers, built for that purpose. In the autumn the fine healthy colour of the men, women, and children showed they were well fed, [285] and contrasted strongly with our people; but in the spring I thought we had the advantage. Our biscuit was eaten as a curiosity, but neither it nor the salt meat relished; the preserved meat was, however, taken readily. A quantity of deers' excrement was collected, and is I believe had recourse to in times of scarcity as an article of food; but such did not seem to be the case this season, as we were never importuned for food; and my anxiety was relieved lest, in their desire to possess our knives, &c., they might have deprived themselves of sufficient subsistence till the spring. They may be considered as entirely a carnivorous race, and for the most part consuming their food raw. A favourite morsel is the yellow top-knot of the king drake, which they were usually permitted to bite off on paying us a visit. Water, although acceptable during the winter, is consumed sparingly. Tobacco and spirits they are so far fortunate as to be yet unacquainted with."

12: Collinson--286 (1851-53) 1889 Copper Eskimo
116, 103, 177, 128, 412

"Mr. Arbuthnot succeeded in inducing some of them to draw a chart of the coast to the eastward, which was several times repeated, agreeing very well with each other, but were totally unlike the coast afterwards travelled over by me. He also appeared to think they indicated a ship being there; but in my opinion it was a repetition of his question. They appeared to know the woman Kablalla mentioned by Sir James Ross, but had no knowledge of Oogeolik. But little or no iron was found amongst them, needles, knives, and fish-hooks being made of copper; an occasional iron or even a brass tip was seen on the arrows, and the few and well-worn beads on their persons showed that this was in all probability the first time they had come in contact with white men."

17: Merwin--165
116, 412

(No date) 1915

Copper Eskimo

"Aside from clothing, the articles made by the Copper Eskimo show much ingenuity, for with the simplest of tools, articles of remarkable workmanship are made. Several types of knives are used. The material available, the preference of the maker and the probable use of the weapon, determine its form. In addition to the bone knives which are used only in making snow houses, there are knives of copper and iron. There is a long copper knife made especially for snow cutting, but many prefer to use the dag or dirk-like knife with its double-edged metal blade and long handle. These dags and knives, like butcher knives, some with the ordinary style handle and some with a handle much longer, are used by the men in making snow houses and in cutting up game. A special knife is used for working wood and in making implements. This knife, with its short crooked blade and long antler handle, is much like the work knife used throughout the far north.

One other cutting instrument of great importance is the ulu or woman's knife. This ulu, with its curved blade of iron, copper, tin or even slate, is used in many ways, such as cutting up animals for food and skins for clothing. In eating, a ulu is nearly always preferred for cutting the meat. Especially is this true if the knife be of copper. The shank which connects the blade and the handle is made flat enough to allow deep cuts to be made.

In order to clean and soften skins, their inner surface must be carefully scraped and

worked. For this purpose a pistol-shaped scraper of antler having a small fan-shaped copper blade is used. This sort of scraper is seldom if ever used among any other people. An adz is used in working wood and in making stone lamps and kettles. This small tool, with its sharp, well-made copper blade, attached to a handle of antler, is very much like those used in Europe in the Bronze Age. Another ingenious tool is a saw resembling a back-saw. This is made of a serrated piece of sheet iron riveted to an antler handle. Large pieces of copper are pounded into shape and sharpened to form chisels or ice picks. These blades are set into antler handles, which for the ice picks are cut slanting so that they may be attached to poles. With this new type of tool, holes are easily and quickly cut through the ice."

17: Merwin--167-168 (No date) 1915 Copper Eskimo
116, 412

"For sewing and garment making the women of Coronation Gulf have several interesting articles, of which the scissors are the oddest. One pair has been carefully cut out of bone and strips of iron riveted on to form cutting edges. Another pair is rather crudely cut out of sheet iron. Needles of iron or copper are very valuable and scarce, so cases are made to contain them. A few years ago a needle was of the same value as a butcher knife or a complete bow outfit. The manufacture of a needle requires much time and skill, for after it has been pounded into shape and sharpened it may be broken in drilling the eye. The needle case is a caribou leg bone, which has [168] been cut off at each end, cleaned of marrow and decorated with a simple incised design. Through the bone is a strip of leather into which is thrust the one or two needles. At one end of the strap one or more hooks or toggles are usually attached. These serve to fasten the case to the belt or to hold the scissors or thimble. The thimble is of bone, open at the end, and pitted only over a small part of the surface. To the other end of the case strap may be attached bone implements used to pick marrow from bones or to crease with in making moccasins."

20: Cadzow--150-152 (No date) 1924 Copper Eskimo
116, 412

"The strange snow-shovel represented in the accompanying illustration (fig. 39), fashioned from the wood of some coniferous tree, was obtained in 1918 from the Copper Eskimo in the vicinity of Tree river, Coronation gulf. Considering the fact that it is made from a single piece of wood, it is of unusual size for an Arctic implement, for it measures 41 inches in length by 20 inches in maximum width, tapering to 3 inches at the proximal end, which is carved to represent a seal's head. Its thickness is one-half to three-quarters of an inch. The front side of the blade is slightly concave, and on its lower edge a strip of caribou-horn is lashed with sinew thongs, the horn being so cut as to present a flat surface against the wood and a sharp cutting edge against the snow. In the middle of the blade, 19 inches from the proximal end, two holes, 6 inches apart, are drilled through the wood. A piece of antler inserted in these holes and held in place with bone pegs functions as a hand-grip. In use the shovel is remarkably well balanced, and a considerable quantity of snow could be carried with it. The implement has been greased with seal-oil, in order that the snow might slip from it easily and that the wood might be strengthened and preserved. [151]

Among the Eskimo a snow-shovel is considered an essential part of the domestic equipment of every family, for it always comes in handy for clearing away the top snow from a proposed camp-site, and it is used also for filling the cracks between the blocks of a new snow-house and for banking loose snow against it, the latter being an important detail of the erection of an iglu in winter.

Because of the lack of raw material for making others, the Eskimo of Coronation gulf do not care to part with their snow-shovels, especially when they are in such good condition as the one here described. In his preliminary report, Stefansson says on this point: 'A wooden snow-shovel made from a single piece of wood is the most difficult article [152] that the Copper Eskimo have to make. It is extremely hard for them to obtain a log large enough so that a shovel can be adzed out of it, and the labor is considerable. A good snow-shovel made from one piece of wood is worth as much as a dog or a very good sled. (1)

The Central and Western Eskimo use three types of snow-shovels: 1) a rude form with a rounded, flat blade made from a piece of bone of the whale, lashed to a separate handle of wood; 2) a form with blade and handle carved from one piece, or with the blade made of several flat pieces of wood lashed together; and 3) the type herein described. A fine example of the first type, from Bering strait, is exhibited in the Eskimo Hall of the Museum. Both the first and second types are illustrated in Nelson's memoir on the

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"1. Anthropological Papers of the American Museum of Natural History, vol. XIV, no. 1, 1914."

20: Cadzow--150-152 (No date) 1924 Copper Eskimo-3
116, 412

Eskimo about Bering strait. (2)"

"2. Eighteenth Report of the Bureau of American Ethnology, fig. 22, and pl. 35, fig. 4.

D. A. CADZOW"

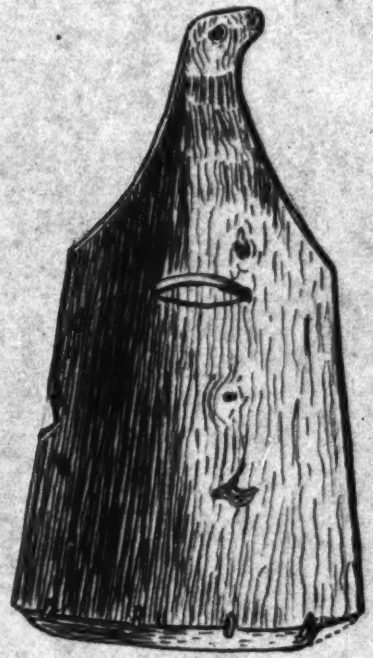

FIG. 39--Snow-shovel from Coronation gulf. (Length, 41 inches.)

Their hatchets are made of a thick lump of copper, about five or six inches long, and about two inches square, bevelled away like a mortice-chissel, with a handle about a foot, or more, in length. Neither the weight nor the sharpness will admit of the tool being used with much success by itself, and therefore it is generally applied to the wood like a chissel, and driven in with a heavy club."

2: Stefansson--67 (1908-1912) 1914 Copper Eskimo
116, 412, 415

"On the table in front of the lamp [AW: in the snow house] will usually be found some platters made of wood for holding meat and dippers of musk-ox horn from which the blood soup is drunk. There is also a woman's knife, the rod of antler which she uses in place of a fork to turn over the meat when it is boiling and to fish it out with when it is done, the blubber pounder of musk-ox horn to crush the frozen seal blubber before it is put into the lamp, and the short flat-tipped stick that is used for trimming the lamp. There is also kept convenient a little pencil-like stick the end of which is charred and stuck in grease. This can be made at any time to form a torch if anyone wants to look in a dark corner of the house or under the bed for something. By the door is a flat stick like a ruler that is used for beating the snow out of the clothes when anyone comes in from a blizzard."

2: Stefansson--70 (1908-1912) 1914 Copper Eskimo
116, 264, 412

"In eating, both sexes prefer to use ulus (women's knives), a copper ulu is preferred to a man's iron knife."

28: Jennass E-5 (1914-1916) 1946
ND8 Copper Eskimo ND8

[P. 1]

MATERIAL CULTURE OF THE COPPER ESKIMO

INTRODUCTION

In 1914, when the Canadian Arctic Expedition established its headquarters at Bernard Harbour in Dolphin and Union Strait, on the western fringe of Copper Eskimo territory, the natives preserved their old culture, virtually unimpaired, despite contact with several explorers in the middle of the nineteenth century, and with others during the early years of the twentieth. The only visible change caused by these contacts was the introduction of a considerable quantity of iron, which the Eskimo hammered cold, as they hammered their native copper, and had already substituted for copper in knives, adzes, harpoon heads, and needles. From lack of ammunition the only men who possessed rifles, five in number, had fallen back on the bow and arrow, which was still the universal weapon of the chase. Of the arrows not tipped with bone about two-thirds bore tips of hammered copper and only one-third tips of iron; the ice chisel and other tools retained their copper blades and points; and the soapstone pot for cooking meat held undisputed sway in every household. All clothing was of skin or fur, mainly from the caribou and the seal; and in cut and adornment it followed without change the styles set by earlier generations. The blubber of the seal, burned in a soapstone lamp, provided the only artificial light, and throughout the winter months all the energies of the Eskimo were concentrated on the pursuit of seals at their breathing holes in the sea ice.

Ten years later the situation had undergone a profound change. Native copper had become practically valueless and served for rivets only. Bows and arrows had disappeared, because every native was now armed with a high-powered rifle. Other weapons and tools had steel or iron blades, metal cooking pots had ousted the soapstone vessels, and primus lamps and kerosene lanterns were spreading from home to home. Fur clothing was tending to follow western Eskimo patterns, and to be overlaid with bead-work, or with imported garments of cotton or wool. Dissatisfied with the old-fashioned snow-hut and skin-covered kayak, one native had even erected a plank cabin heated by an iron stove, and purchased a motor-boat to transport his household goods along the coast during the brief summer months. The tentacles of the fur trade had firmly gripped the region, and the trapping of foxes, animals of no economic importance in earlier times, now rivalled in importance the hunting of seals and caribou.

Fortunately, before this revolution occurred, the Canadian Arctic Expedition had brought out a large collection of Copper Eskimo specimens, nearly all of which are now stored in the National Museum at Ottawa. These specimens, and

28: Jenness E-5 (1914-1916) 1946
ND8 Copper Eskimo ND8

CHAPTER I

MATERIAL RESOURCES

Few people have been called upon to sustain life and perpetuate their race on such meagre resources as the Copper Eskimo. Even if they had been acquainted with agriculture the climate debarred it, just as it debarred the growth of trees except in two or three sheltered valleys along the southern fringe of their territory. It restricted not only the flora but the fauna, leaving the natives dependent for their food and for much of their equipment on one land animal, the seasonally migrating caribou, and two sea mammals, the foetid and the bearded seals, supplemented by such fish as they could capture in rivers, lakes, and bays. Ignorant of all metals except their native copper, which seemed to them only a malleable stone, and cut off from contact with any but neighbouring tribes, little or no more advanced than themselves, they had to build up their lives on the scanty resources provided by their own narrow environment, and rely on their own ingenuity to supply all their needs.

The resources provided by their environment fall naturally into four groups:

Wood
Stone (including native copper and other minerals)
Bone, antler, horn, ivory
Hides and sinew.

WOOD

The Copper Eskimo obtained their wood from two sources. First, there was the driftwood, mainly spruce and cottonwood, carried to the ocean by Mackenzie River far to the westward and borne by the winds and currents to Dolphin and Union Strait and western bays of Victoria Island. Then in the valleys of three rivers that flowed into Coronation Gulf, Coppermine, Napaktauktauk, and Tree, there stood scattered groves of spruce, small and stunted, a few miles from the coast, but larger as one proceeded south. Far to the southeast, too, near Thelon River, were other stands of spruce that the Eskimo from Bathurst Inlet and from the eastern shores of Victoria Island occasionally visited in their wanderings. Thus the Copper Eskimo had abundant wood to satisfy all their needs; but as driftwood was very scarce in many districts, and the standing timber on the southern fringe of their territory could be reached only after a long journey overland, which many natives were disinclined to make, manufactured objects of wood were among the commonest articles of trade and passed freely from one end of the territory to the other. Moreover, so crude were the Eskimo tools, and so great the labour of cutting down the trees and hewing the timber into shape, that any object of moderate size, such as a sled-runner, a table, or even a tent-pole, commanded a high price.[1]

The principal tools used in working wood were the adze and the whittling knife (*See* pp. 100 and 103). Bone or antler wedges, generally made for each occasion and immediately discarded, served to split small logs and planks; they were driven home with boulders. Lacking saws, the Eskimo shortened a plank in one or other of three ways: they hacked it with the adze; gouged it across with the grooving tool (*See* p. 100); or they drilled a line of holes across it with the bow drill.

[1] Cf. Stefansson, V.: The Stefansson-Anderson Arctic Expedition: Anth. Papers, Amer. Mus. of Nat. Hist., vol. XIV, pt. I, pp. 31, 32 *et al.*, New York, 1914.

412 Two incidents that came directly under my notice in the summer of 1915
322 were fairly typical. A native with whom I was travelling in southwest Victoria Island discovered on the beach a long, nail-studded plank that had presumably fallen overboard from some vessel. He carried it several miles inland to our camp, and there spent half a day splitting it into poles for fish-spear handles, two of which he sold to a kinsman. A few days later another native found a second plank, which he proposed to convert into a sled-runner, and with this purpose in view trimmed it slightly with his hunting knife. After consulting his companions, however, he decided that a new sled-runner was not needed, so he turned the [239] plank over to his stepfather to fashion into tent-poles. In each case the native split the plank with a crude antler wedge driven home by a boulder.

322 The uses of wood were naturally manifold. From it were made the sled,
[372] the tent-poles, the frame of the kayak, the snow shovel, the table, food trays, and other articles too numerous to mention. Odd chips of wood sometimes served as fuel during the summer months, although the Eskimo preferred
824 heather or willow twigs. Willow twigs had a special use; sewn together in a
513 long strip they provided a mattress to protect the bedskins from the snow.

STONE

333 Stone (apart from native copper) played an astonishingly small rôle in the
[342] economy of the Copper Eskimo. Their winter home was invariably the snow-hut, although their predecessors in the region had dwelt in huts of snow or wood, whose ruins could still be traced in numerous places along the coast. Loose stone boulders held down the edges of the Copper Eskimo tents; pillars of stone (in many cases flat slabs of dolomite easily piled one on top of another) supported kayaks, sleds, and other goods that were temporarily abandoned during the summer months; and heaped-up boulders protected caches of meat or clothes from the ravages of foxes, wolves, and birds; but any real construction in stone was conspicuously lacking. There were no stone knives or adzes,
324 no arrow heads tipped with stone, no stone sinkers for fishing lines or nets, and
412 no stone scrapers for use on wood or hides, although implements of all these types had been used by the earlier inhabitants and were sometimes gathered as curiosities by the Copper Eskimo themselves. There were stone hammers and whetstones, it is true, but these were merely unshaped pebbles picked up when
[415] the need arose and afterwards discarded. In short, stone provided the material
[354] for two objects only, the lamp and the cooking pot; and the stone cooking pot
[77] was discarded soon after our visit in favour of iron vessels brought in from the outside.

135

Figure 1. Lamp of native copper. IV.D.1441. 1/1.

324 These two vessels, the lamp and the cooking pot, were invariably made from
415 soapstone (talc chlorite schist), originally with copper-bladed adzes, but in our
354 time with adzes of iron. Freshly quarried soapstone readily scratches with the
316

28: Jenness E-5 (1914-1916) 1946
ND8 Copper Eskimo ND8

fingernail, so that the labour of manufacturing even a large vessel was comparatively slight, never requiring more than a few days. We saw no pots made of any other material, but from Prince Albert Sound we obtained two lamps, one fashioned from a red sandstone, the other from an igneous rock, that could hardly have been hollowed out with adzes in the ordinary way, but must have been shaped by some pecking and grinding process. Their owners knew nothing about their manufacture, and there is good reason to believe that they were not made by the Copper Eskimo, but came in from Hudson Bay.[1]

As stated in the introduction, the natives considered their amygdaloidal copper,[2] which took the place of stone, bone, or ivory in so many of their implements, as merely a peculiar stone that they could work into shape, cold, by hammering with boulders and pebbles (Figure 1). Whether they were able to drill copper before they obtained iron is uncertain; if so, they must have used stone- or copper-pointed drills. In our time they still retained one or two of these copper-pointed drills, but used them, so far as we observed, only on bone, antler, and wood.

Figure 2. Lamp of galena, used for marking skins. IV.D.300. 1/1.

The only important mineral besides copper was iron pyrites, which the Eskimo gathered mainly in the beds of two streams, Kugaluk River in the southwest of Victoria Island and a creek a few miles east of Coppermine River. There were other sources, however, that I failed to record. This mineral served the natives instead of flint and steel for striking fire. They possessed also a few fragments of galena (Figure 2) and litharge, which they used for marking skin and wood; the galena came mostly from Galena Point in Bathurst Inlet, but the source, or sources, of the litharge is not known.

BONE, ANTLER, HORN, IVORY

The caribou and the musk-ox supplied nearly all the bone that the Copper Eskimo required, although for shoeing the runners of their sleds they used rib bones from occasional whales that drifted up on their shores. There was hardly a bone in the two land animals that could not be turned to some purpose. Leg bones were in special demand for skin stretchers, for needle-cases, and for sheathing the wooden ends of harpoon shafts; another type of skin stretcher was fashioned from a caribou or musk-ox shoulder blade. The ribs served for handles of various kinds, for small toggles, pins, and bows for the drilling set. Other toggles were made from the breast or pelvic bones, and the astragalus provided a ready made mouthpiece for the drill.

The caribou alone provided antler, which was just as useful as bone, and interchangeable with that material for most purposes. On the other hand, ivory, which Eskimo elsewhere often substituted for bone and antler, was extremely rare, because neither the narwhal nor the walrus frequents the waters adjacent to the Copper Eskimo territory; consequently, the few ivory objects we saw among the natives almost certainly reached them by trade from the east or the west. Sheep likewise were absent, so that all the horn in use came from the musk-ox. This horn sometimes took the place of bone or antler, but it was especially prised for the manufacture of ladles, scoops, drinking horns, toggles for the sled, and hammers for pounding blubber.

Originally the Copper Eskimo used only four tools, all with copper blades, for shaping bone, antler, and horn, viz., the adze, the whittling knife, the grooving

[1] See p. 88.

[2] For the source of this copper see Reports of the Canadian Arctic Expedition, vol. XII, pt. A, p. 32; vol. XI, pt. A, p. 88 *et seq.*

tool, and the drill. In our time nearly all these tools had steel or iron blades, and a fifth had been added, a small saw with a blade of hoop iron. Saws were not numerous, however, and it was still a common sight to see a native scoring deep cuts in bone or antler with his grooving tool and then breaking out sections with his adze. The curved whittling knife gave the final shape, and rubbing, first with stone or sand and then with a strip of hide, the smoothness and polish. Musk-ox horn alone was susceptible of a different treatment; to make from it ladles and scoops, the natives split it longitudinally, steamed it over their cooking pots, then opened it out and bent it to shape by simple pressure and hammering.

There was current among the Copper Eskimo one other substance similar to the foregoing, baleen, but it was rather scarce, and in the eastern part of the territory almost unknown. Whether it came from stranded whales, or was brought in from the west, I did not discover. The natives used it, apparently, for fishing lines only, lines mainly for catching tomcod during the winter months when the more usual lines of sinew tended to become brittle with encrusted ice. I never saw them cut or split baleen, but doubtless they used the whittling knife for this purpose.

HIDES AND SINEW

It is hard for the civilized inhabitant of a warmer country to realise the immense importance of skins in the domestic economy of the Copper Eskimo. They provide him with clothes and bedding throughout both winter and summer, bags in which to store his clothing, a tent for use nearly half the year when a snow-hut was either uncomfortable or impossible, a cover for his kayak, straps and lashings for his sled, harnesses and traces for the dogs, lines and lashings for harpoons and other weapons, packing lines, dog packs, water buckets, pokes for meat and blubber, and other articles for which Europeans utilise cloth, rope, or metal. It was, consequently, of the utmost importance to the native that he should know how to treat skins to the best advantage. Fortunately, the two animals on which he depended most for his food, the seal and the caribou, were precisely the ones whose hides were the most useful.

Seal Skins. The Copper Eskimo had two methods of skinning a seal. They generally made a cut around the base of each flipper, another around the neck, and a third down the belly, after which they separated the skin from the blubber with a knife. As it was impossible to remove all the blubber in this way, the skin was then soaked in warm water. Holding one end in her mouth while the other remained in the pot, the woman (for the work almost invariably fell on the housewife) scraped it thoroughly with her curved knife. As soon as the weather was warm enough she set it out to dry, sometimes on top of the house, sometimes on the ground, sometimes pegged over and around a block of snow.

A sealskin thus dried was roughly oval in shape and still retained the hair on the outside. If you folded in the ends, doubled it over and tied a line to each end, you had the common Copper Eskimo fishing bag; if you laced each end across through the holes by which it was pegged out, you had a dog pack, broad and flat in the middle where it rested on the animal's back, and bag-shaped at each end for holding the meat or clothing. The hair was no disadvantage in such skins; indeed, for raincoats and for spring foot gear it was indispensable, but as the skin was more supple without it, it was generally removed by resoaking in warm water and scraping with a knife. To soften the skin still more, and to change the outer surface from a dark colour to white, it was subjected to further scraping, and, after drying, rubbed between the hands and chewed between the teeth, when odd scraps that came away found lodging in the chewer's stomach. From these creamy white skins were made the sealskin

shoes worn by both sexes during the greater part of the year. Steeped in urine for several hours they became waterproof, and served for summer boots, water buckets, quivers, and other articles.

For lines and lashings (which the men made, not the women) it was not necessary to tan the skin; after the removal of the hair the man merely soaked it for a third time in warm water, and cut it in a continuous spiral with his curved whittling knife, while his wife or a friend held the severed parts taut and slightly apart. In cutting he simply pressed the knife, guiding it with his thumb from below, but wherever the strip was very narrow he generally sawed the blade up and down, holding the severed parts in his left hand and guiding the blade with the left index. Newly cut lines were stretched taut between two or more poles out of doors to dry.

The second method of skinning a seal was used only when the owner required a bag with a small opening for storing blubber. The woman then cut the skin around the base of the neck and from the bottom of one hind flipper across to the other. To separate the flesh from the skin—and as far as possible also the blubber—she circled the long snow-knife round between them from each end; then by drawing back the flippers and severing them at the joints with her curved knife, she could draw off the skin over the tail. Subsequently she cut away most of the adhering blubber and sewed up the bottom, leaving the neck open to be tied with a sealskin cord when the poke was filled. In most cases she sewed a strap handle to each end to facilitate handling, as these pokes when filled with blubber weighed from 150 to 200 pounds; if the poke was small, however, she substituted for the straps a short stick thrust through the neck. The Copper Eskimo never skinned an animal through the mouth after the manner of the western Eskimo, or closed their pokes with stoppers.

Although bearded seals were numerous in Dolphin and Union strait, the Eskimo secured very few; and they used for harpoon and sled lines most of the skins of those they did kill, though they were fully aware of the superiority of bearded over foetid sealskins for foot gear. Even their kayaks they covered with the skin of the much commoner foetid seal. Naturally, they treated both kinds of skin in the same way.

Caribou Skins. More important even than sealskins to the Copper Eskimo were the caribou skins from which he made his bedding and the greater part of his clothes, as well as dog harnesses, spring and summer tents, and many other articles that were absolutely indispensable. He skinned the caribou in a way slightly different from that of the ordinary white hunter or from that of the Indians to the south. Beginning at the throat, he cut right down the belly to the tail, then from the hock of each leg up the back as far as the knee, continuing up the inside of the thigh until he reached the incision along the belly. He next punched away the skin from the body down one side, drew out the tail and pulled the skin off down to the feet, where he cut it away at the level of the front of the hoof. Then he slit it down the side of the cheek through the eye and round the base of the horn, and punched it loose with the handle of the hunting knife. Rolling the animal over, he pulled out the skin from below, punched it free of the whole body, and stripped it off down the remaining two legs. A final cut down this cheek similar to the one on the other side, and a few more punches, completed the operation. Thus the skin of the head was removed in three sections that joined at the neck; but the middle strip ran from between the horns to the top of the nose only, as the Eskimo never troubled to remove the skin around the nostrils. Whenever the horns were in the velvet the hunter could jerk the skin over them; but with old bulls whose horns had many branches and roots almost meeting on the forehead, he was often satisfied to strip only the cheeks and leave the skin on the middle of the face untouched. Occasionally he slit from the nose down to midway between the horns, leaving

a large hole where these protruded through and two small holes that marked the eye sockets. The ears he usually cut off at the roots, and pulled them out of the skin with his teeth at his leisure; but in certain circumstances, when it was forbidden to use a knife, he pulled free the outer integument on the spot.

In the late spring, when the caribou was putting on a new coat, the winter hair remained longest on the throat and belly. As this part was useless for clothing, the hair being prone to shed, the Eskimo frequently preserved only the part on which the new coat had already formed and threw the rest of the skin away. In such cases the preliminary incisions for removing the skin followed the outlines of the short hair. Often, however, the native anticipated the natural shedding of the winter hair by pulling it out with his thumb and fingers, leaving the new coat very short and spotted with white hairs, but in this condition highly prized. Later in the season, when the belly of the animal was covered with short white hair, invaluable for trimming, he made a cut along each flank and removed that part of the skin before detaching the remainder.

Blood stains were extracted by rubbing or stamping the skin in hard snow, which acted like damp blotting paper; or by steeping it in cold water and squeezing the hair. The Copper Eskimo woman was very careful not to allow a green skin to dry before scraping away with her curved knife the fat that still adhered to it; and as these scrapings were pure fat, she generally ate them at once, or put them aside for future consumption. Then she stretched the skin out to dry by pegging it to the ground with sticks or weighting down the edges with stones; the white belly skin and the large short-haired skins intended for bedding she always pegged down in order to stretch them as much as possible. When travelling across country day after day in the short Arctic summer, the skin was laid over the back of the pack or across a long pole; and at every halt it was stretched out afresh on the ground to hasten the drying, because a green skin weighed twice as much as a dry one. Once the skin was dry it could be laid aside and not touched again until needed. Then the owner sewed up the rents and scraped the whole underside with the copper- (now iron-) bladed scraper (See p. 84). The woman (or man, for the men often scraped skins while the women sewed them) sat back on the sleeping platform, or on the ground outside the tent, and stretched out the skin in front of her. Holding it tightly pinioned at the bottom between her crossed legs, she pulled it taut above the knee with her left hand and scraped rapidly downwards away from her with the right. A sudden relaxation of the leg, and a quick jerk, found her scraping in a new place. To the onlooker her body seemed strained and her attitude very uncomfortable, but long practice greatly reduced the fatigue, though the labour really was hard. Indeed I have seen the perspiration rolling down a woman's face as she scraped a skin outdoors when the temperature was below zero Fahrenheit.

The Copper Eskimo woman often ate the scrapings that came away during this operation, although they contained very little fat. To soften the skin still further she rubbed tepid water over its under surface, folded it up, and laid it on one side for a few hours. Then she scraped it again, this time with an instrument made from the shoulder blade of a musk-ox, which merely stretched and softened the skin without removing anything from its surface (See p. 83).

The stretching and softening of the skin was usually the last process it underwent before it was made up into clothing. If, however, the woman desired the skin without fur, as for making the upper legs of her long boots, she scraped the hair from the dry skin with her curved knife. Copper Eskimo clothing was often decorated with red, black, or white bands; the white was the natural colour of the skin; the red was produced by rubbing with litharge; and the black parts were either untanned sealskin, or else seal or caribou skin stained with galena. Ordinary dirt stains on white deerskin could be removed with dry snow.

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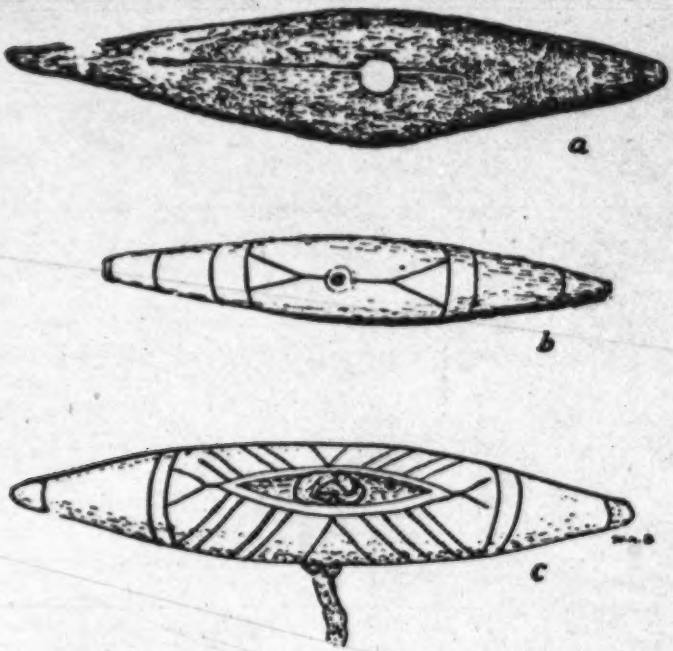

Figure 40. Women's belt toggles. IV.D.1372, 844. 1/1.

301 For a time I fancied that belt toggles could be distinguished from the
321 toggles used for hauling seals (Figure 150) by the direction of the line-hole,
291 but my collection of both kinds showed that any such distinction was illusory;
225 in both, the hole was drilled indifferently from top to bottom or from side to side. It is probable, indeed, that many a toggle that served for hauling seals during the winter months became a belt toggle when the sealing season ended. At all events, I know of no criterion for separating the two except that if a toggle is of wood, or if its hole is of very small diameter, it probably terminated a belt strap and was not used for sealing.

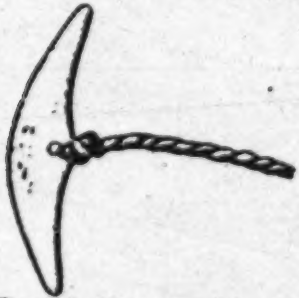

Figure 41. Toggle from child's belt. IV.D.713. 1/1.

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Combs and Snow Goggles. Though not strictly ornaments, these may conveniently find a place under that heading. Combs were not very highly regarded by the Copper Eskimo. Many women employed their fingers instead, and those who did possess combs used them only rarely. All that I saw were made of bone, and seldom exceeded 4 inches in length.

bone, and seldom exceeded 4 inches in length. The teeth, which generally numbered from five to seven, were cut with the man's grooving tool, and a hole was nearly always drilled in the upper end for attaching the article to the needle-case. Most combs were simply cut off in a blunt point at the top, and though at times this shape was slightly modified, there was never any attempt at ornamental carving. Even the surface was rarely etched, and then only with two or three straight lines or with the ring-and-dot pattern. Typical specimens are shown in Figure 42.

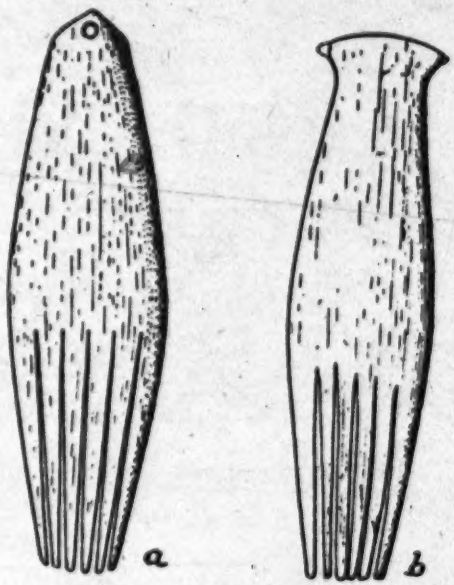

Figure 42. Women's combs. IV.D.1093, 893. 1/1.

Snow goggles (Figure 43), made of wood or antler, had the shape usual among all Eskimos. Projecting brow-pieces to intercept light from above were not uncommon. The cord was of sinew or sealskin. The slits were of even width, rarely widened at the inner end as in many goggles from Hudson Bay. Ornamentation was absent.[1]

Tattooing. The appearance of the women was greatly affected by tattooing. Only two men were seen with tattoo marks, which in both cases consisted of two short lines across the bridge of the nose. The marks on one man, a native from Coppermine River, had no significance that I could discover. He stated himself that they were due to an arbitrary whim, but I strongly suspect that

[1] See Plate VI in Report of the Canadian Arctic Expedition, vol. XII, pt. B, p. 78B.

28: Jenness E-5 (1914-1916) 1946
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CHAPTER III

HOUSEHOLD FURNITURE

FIRE-MAKING

The Copper Eskimo were familiar with the method of making fire by means of the thong drill, but rarely practised it because it involved strenuous labour and suitable wood was rare. The handles of some of their whittling knives and other tools had small holes to fit the top of the spindle, for a man pressing down with both hands could exert greater force than was obtainable with the usual drill mouthpiece. Figure 46 shows the hearth of an old fire-making apparatus; the specimen was discovered on the beach at Kater Point, close to Bathurst Inlet.

The ordinary method of making fire was by striking together two pieces of iron pyrites, for which there were several sources around Coronation Gulf, the two best known being Kugaluk River, which flows down from the Colville Hills in southwest Victoria Island into the sea behind Cape Kendall, and a small river a few miles east of Coppermine River. The pyrites was occasionally covered with sealskin or caribou skin to protect the hand.

The spark was caught in willow catkins contained in a small disk-shaped bag of sealskin closed with a circular lid of the same material (Figure 47). A little blowing soon spread the glow over a large surface so that it could ignite a lamp-stick or a bunch of matted moss roots dipped in blubber. To foment a flame, however, most Eskimo kept a little stock of dry grass, which, like the lamp-wick of eriophorum seed, they carried in small bags made from the lining around the heart of some animal (Figure 48), from the skin on a loon's foot (Figure 49), or from caribou or marmot fur.

Figure 46. Wooden hearth of fire drill. IV.D.219. 2/3.

LAMPS

Many writers have stressed the fundamental importance of the Eskimo blubber lamp, without which the natives could not have survived along the northern coast-line. Although in certain regions they have now adopted substitutes such as stearin candles, coal-oil lamps, wood stoves, and primus stoves, throughout large parts of the Arctic the blubber lamp still holds its own.

Porsild[1] states that "In Arctic regions proper, train-oil is the only fuel, and there the lamps are large; where other fuel —heather, wood, peat or coal—is available, either the whole year round or only in the summer, the lamp used for burning blubber oil loses its importance as a heater, and is used

[1] Porsild, Morten P.: The Material Culture of the Eskimo in West Greenland; Meddelelser om Grønland, vol. LI, p. 316.

I know of only one source for this material that is used at the present time by the Copper Eskimo, Port Epworth at the mouth of Tree River in Coronation Gulf, where the talc chlorite schist occurs as an inclusion in the granite. It is very coarse in texture, and of a pale grey colour, as can be seen in unused specimens or by fracturing an old one.

Nevertheless, there seem once to have been other sources. An old woman who lived at the east end of Coronation Gulf told me that long ago her people used to make lamps and pots from stone obtained in a quarry on Rae River. An early explorer, John Rae, did find soapstone at the fall 10 miles from the mouth of this river,[1] but only in thin beds, which might explain why the Eskimo ceased to use this source. Then again, I purchased from a Coronation Gulf native a little toy lamp of typical Copper Eskimo shape (Figure 50), which was certainly not made from the Port Epworth soapstone, for it is much finer in texture and of a pale green colour. In the same region I obtained also an unfinished implement, resembling an imitation lance-head, which was made from a very similar soapstone, but is yellowish green. Finally, from the west coast of Hudson Bay, probably from Chesterfield Inlet, the museum has a toy lamp (IV.C.165) that resembles in colour, texture, and graining the green toy lamp bought in Coronation Gulf; in shape and dimensions the two are practically identical except that the Hudson Bay specimen has no shelf. Morley E. Wilson, of the Geological Survey, Canada, expressed the opinion that these lamps almost certainly came from the same quarry, because this type of soapstone is exceedingly rare in Canada, and that the implement like a lance-head was also derived from the same locality. It is worth noting that there are deposits of soapstone near the mouth of Back River.

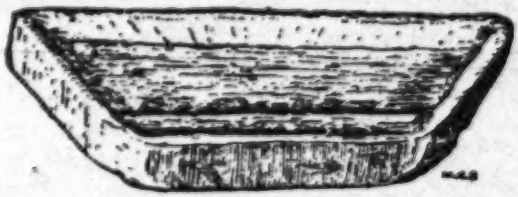

Figure 50. Toy lamp, of pale green soapstone. IV.D.613. 1/1.

Up to a few years ago natives from Dolphin and Union Strait in the west to Amundsen Gulf in the east often migrated to the Port Epworth quarry in the spring of the year in order to manufacture their own lamps and pots. Each family usually made more vessels than it required for its own use in order to have some for barter when it returned home the following autumn or winter.

Women and children often fashioned the smaller lamps and pots. The larger ones were the work of the men, although once they were finished and handed over to the housewife they became her exclusive property. No special skill was required; children 10 years of age could make small lamps just as good as those made by their elders. A little more care was necessary in working at a pot, because the rock, though soft, was somewhat brittle, and the walls and bottom had to be comparatively thin; but even this was not beyond the ability of a child, as it required patience rather than technical skill. With his crude copper tools a native could quarry out his block and make the largest lamp that was ever used in about 3 days, and the largest pot in no more than a day longer; iron tools, of course, appreciably lessened the time. First, he chiselled

[1] Richardson, Sir John: Journal of a Boat Voyage through Rupert's Land, vol. I, p. 312. London, 1851

324 clear of the solid rock a block equal to the length of the desired lamp or pot,
316 then gradually hewed it into shape and smoothed it all over by rubbing it with
412 any kind of hard, smooth stone. Formerly the copper-bladed ice chisel served
461 for quarrying the block, and the copper-headed adze for shaping it, but in more
354 recent times the Eskimo have used hatchets, geological hammers, and chisels with iron blades.

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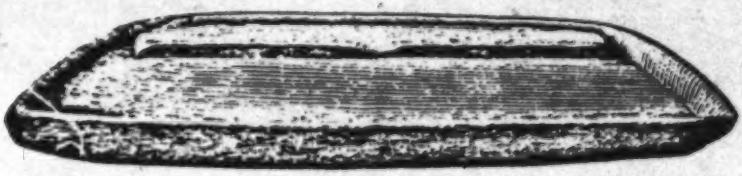

Figure 51. Typical Copper Eskimo lamp. IV.D.657. Approx. 1/8.

The typical Copper Eskimo lamp resembled in shape the lesser segment of a circle in which a large part of the arc was flattened until it was roughly parallel with the sector, whereas the sector itself was very slightly convex. Figure 51 illustrates this general shape. The convexity of the sector was occasionally very marked; and, conversely, the arc was sometimes hardly flattened at all, so that in a few specimens the shape approached an ellipse. The lamp outlined in Figure 52 shows a marked tendency in this direction.

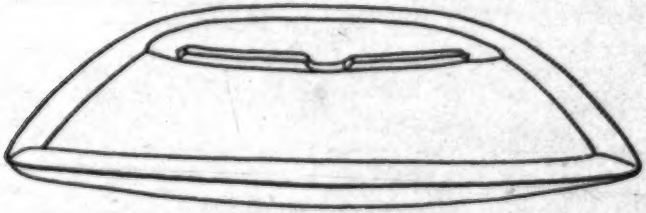

Figure 52. A nearly elliptical lamp. IV.D.631. Approx. 1/8.

The bottom of the lamp was invariably flat. The edges, which were perpendicular, or almost so, on the outside, ranged in thickness from 1½ inches to 3½ inches, and formed a narrow, well-defined rim around the oil well, which comprised the whole body of the lamp hollowed out to a depth of from 1 inch to 1½ inches. The front edge, or lip, sloped down to the well at an angle of around 45 degrees, but elsewhere the edges were practically as perpendicular inside as outside. The well of the lamp was flat like the bottom, not rounded like a saucer. Most lamps were divided into two compartments by a raised ridge parallel to the front and back edges, but very much nearer the back; and the level of the back compartment was nearly always above that of the front, or well proper, thus forming a kind of shelf from which the oil could flow forward through two gaps at the extremities of the dividing ridge, and, in most of the

The lamp-trimmer mentioned several times above was in most cases merely a pencil of wood varying in length from 6 to 18 inches, generally flattened at one end and smoothed. Any small stick, whether of wood, bone, or antler, sufficed in an emergency; I have even seen a man use his knife. The stone (soapstone or asbestos) pencils, often employed in West Greenland and in Hudson Bay,[1] seem to have been unknown to the Copper Eskimo. Unknown, too, were the drip-stands of Alaska, Greenland, and other places. The Coronation Gulf soapstone is not porous as the Greenland soapstone is said to be[2]; and though oil might frequently drip over the edges, it never seeped through the vessel itself. 354 412 [135]

Every household employed torches for lighting extra lamps, for searching the corners of the hut, and particularly for conveying fire from one snow-hut to another. Occasionally a woman used the lamp-stick or even raw lamp-wick, but she always kept for the purpose four or five bunches of matted moss roots that she had collected and dried in the late summer (Figure 47b). Such a torch, dipped in the melted blubber, would burn several minutes, though if carried outside in windy weather it had to be shielded inside a bag or bucket. It was a common sight after a day's march to see the women carrying torches from one hut to another in order to relight their lamps; the first lamp, of course, was lighted with pyrites. 416 [824]

In summer, when the lamp was discarded, the Eskimo carefully extinguished their open-air fires with flat stones in order to reduce the burning wood to charcoal, which readily took a spark on some future occasion and could be kindled into a flame with the breath. In blowing the fire they did not purse their lips as we do, but curled the tongue along the lower palate into a half-cylinder that directed the breath along a narrow path. When carrying glowing coals from one tent or cooking place to another the women usually wrapped them in bunches of dry heather or *Dryas integrifolia;* where no coals were available they used the heather or dryas alone. 372 [824] [137]

POTS

The Back River Eskimo commonly made their cooking pot from five flat slabs of limestone cemented together.[3] Among the Copper Eskimo we saw none of this type, only pots carved from solid slabs of soapstone. Theoretically these pots should have received two forms, one adapted for cooking over the blubber lamp in winter and the other for use over an open fire during the summer months. The pot for use with the blubber lamp should have been a long, oblong vessel, rather narrow, because the flame of the lamp was a long, narrow line; it should have been comparatively deep to hold large pieces of seal and caribou meat; and it might have had considerable dimensions and weight, as it was always carried on the sled during the winter and spring months. The pot for use over an open fire in summer should have been less narrow, and altogether smaller and lighter, because at that season all the household furniture had to be carried on the back. 415 [171] [324] [252] [493] [482]

In actual fact both types existed among the Copper Eskimo, but the longer, narrower form adapted for use over the blubber lamp was far more generally used, as winter conditions prevailed during 8 months of the year. The pot was nearly always rectangular in outline, though one saw occasional specimens of trapezoid form. The corners were sharp, almost at right angles, the sides slightly convex in outline and sloping inward towards the bottom, making the vessel widest and longest at the top; the convexity in the sides was occasionally marked. In large pots there was a tendency for the depth to vary inversely with the breadth, so that the narrower vessels were likewise the deepest.

[1] Porsild, M.: Op. cit., p. 281. Thalbitzer, W.: The Ammassalik Eskimo; Meddelelser om Grønland, vol. XXXIX, p. 535 (Copenhagen, 1914). 113

[2] Birket-Smith, K.: Ethnography of Egedesminde District; Meddelelser om Grønland, vol. LXVI, p. 193 (Copenhagen, 1924).

[3] Chief Factor James Anderson's Back River Journal of 1855; Can. Field-Nat., vol. LV, 2, 1941, p. 22.

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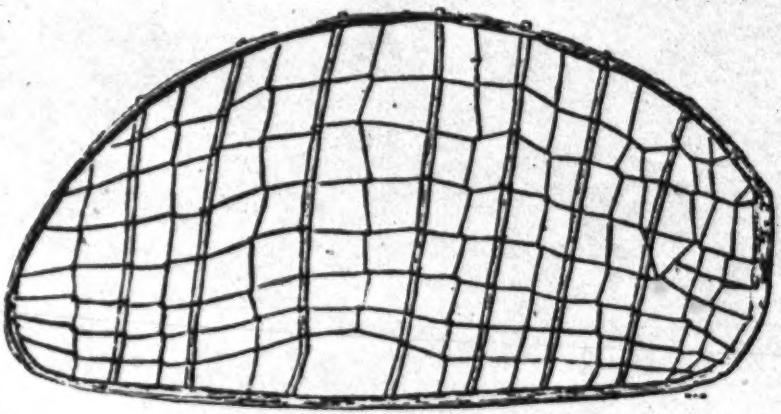

Figure 62. Drying frame. IV.D.647. Approx. 1/14.

BLUBBER POUNDERS

Although a stone or any convenient implement might be used in an emergency to pound the blubber for the lamp, every household possessed at least one, and often two or three implements especially made for this purpose. It was invariably of musk-ox horn, curved evenly almost to a semicircle. The handle was flattened on the sides, and had three or, more usually, four grooves on the under surface to fit the fingers; rarely it ended in a small knob. In size it varied from children's toys 2 or 3 inches long to specimens of 11 inches; the average household size was around 8 inches (Figure 63). Ornamentation was rare, but one specimen in the possession of the Museum (IV.D 1611) has etched into its surface the ring-and-dot design and three parallel lines.

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These Copper Eskimo blubber pounders of musk-ox horn differ slightly from the Netchilik specimen figured by Boas.[1] The latter have for the first finger a deep notch that seems to form almost a right angle, sharply dividing the hammer end from the handle. All the Copper Eskimo specimens that I have seen bear rounded grooves only, so that their form is much more graceful. Blubber pounders were used in west and northwest Greenland,[2] and probably also both in Mackensie delta and in Alaska. The typical West

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Figure 63. Blubber pounders, of musk-ox horn, the smallest a toy only. IV.D.150, 435, 1652. Approx. 3/8.

[1] Boas, F.: Eskimo of Baffin Island and Hudson Bay; Anth. Papers, Am. Mus. Nat. Hist., vol. XV, 1907, p. [illegible].
[2] Thalbitzer, William: Meddelelser om Grønland, vol. [illegible], p. [illegible].

Greenland implement seems to have been made of antler, the heavy base at right angles to the prong forming the hammer head.[1] For Mackenzie delta and Alaska our information is less certain, but some bone-headed mallets figured by Murdoch,[2] were probably used for pounding blubber; they are mounted on wooden handles like the ordinary stone-headed mallet from this region. The Museum possesses a stone mallet (IX.F.223), unmounted, from Barrow that was said to have been used for pounding blubber.

The blubber pounder made of musk-ox horn is evidently a special product of the central regions, where alone, except for the uninhabited northern archipelago and North Greenland, the musk-ox has persisted down to the present day. The convenient shape and weight of the natural horn doubtless suggested its use for this purpose; and the grooving of the handle for the fingers was already practised with certain other tools, such as the marline-spike for the back-lashings of the bow.

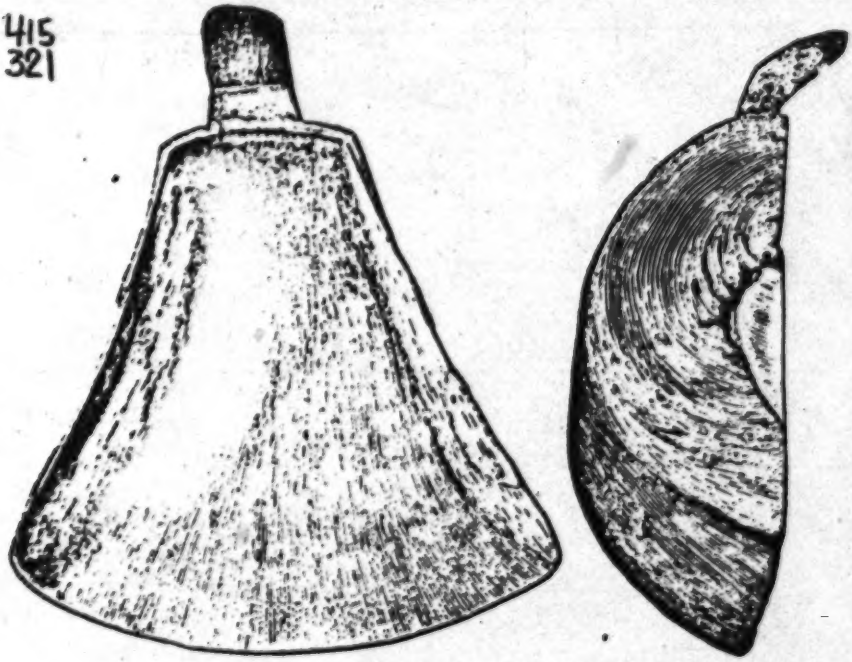

Figure 64. Drinking ladle, of musk-ox horn. IV.D.1488. Approx. 1/2.

LADLES AND DRINKING HORNS

Drinking ladles of musk-ox horn were indispensable to every household, but never carried by hunters in the field. Their usual shape is illustrated in Figure 64. In size they varied from children's toys 4 or 5 cm. long (often made of

[1] Birket-Smith, Kaj.: Ethnography of the Egedesminde District; Medd. om. Grøn., vol. LXVI, fig. 14.
[2] Murdoch, John: Ninth Annual Report of the Bureau of American Ethnology; Smith. Inst., pp. 69-82.

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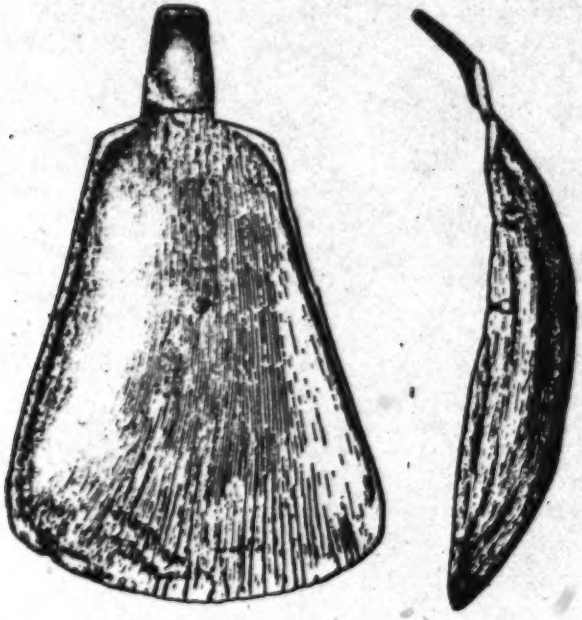

Figure 70. Repaired ladle. IV.D.444. 1/2.

WOODEN DISHES

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The wooden dishes for holding meat and blubber ranged in size from 5 or 6 inches to almost 2 feet. Some were round, with hollowed, saucer-like bottoms; they were made by curving a thin slat of spruce wood into a circle, joining the two ends with bone or copper rivets, and mortising in the bottom (Figure 71). Other dishes, made in exactly the same way, were oval instead of round (Figure 72). Besides these two forms there were oblong dishes with sloping sides, made by hollowing out a solid block of wood with the adze and the knife (Figure 73). I saw no baleen dishes such as are common in other parts of the Arctic.

Figure 71. Round dish, made from two pieces of wood. IV.D.617. 1/2.

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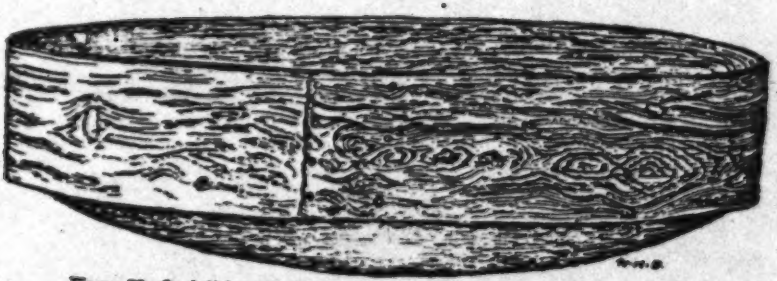

Figure 72. Oval dish, made from two pieces of wood. IV.D.823. Approx. 1/4.

Figure 73. Dish hollowed from one piece of wood. IV.D.838. 1/4.

WATER BUCKETS

415 281 The bucket for carrying water (Figure 74) was made from tanned sealskin, and fitted with a strap handle of the same material. Its usual capacity was slightly over a gallon. The vessel lasted much longer than might have been expected, because holes and small rents could be quickly patched without impairing its tightness. As with our canvas buckets, ice that formed on the inside was broken loose by hammering on the outside with a stick.

415 [239] [484] [191] When travelling in winter, a few Eskimos carried on the back, under the clothing, a cylindrical water bottle (Figure 73) made from the gullet of a seal. The stopper was a wooden plug lashed inside the mouth of the bottle. Similar "thermos" bottles were known in the eastern Arctic also.

Figure 74. Water bucket, of sealskin. IV.D.816. 1/4.

MEAT FORKS

412 321 Meat forks, used for testing and removing the meat from the pot, but not for eating, were made of bone or musk-ox horn, more rarely of antler. Most were slender, tapering pencils, slightly curved, ranging in length from about 7

to 12 inches. Often they were flattened at the broader upper end, whose edges were not infrequently serrated (Figure 76).

Figure 75. Water bottle, made from the gullet of a seal. IV.D.291. 1/2.

Figure 76. Bone meat forks. IV.D.801, 498. 1/2.

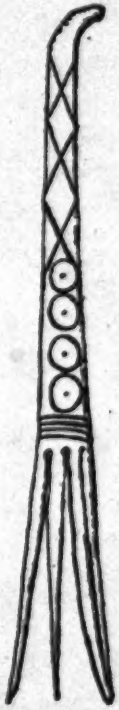

Figure 77. Meat fork, decorated. IV.D.1692. 1/2.

A very unusual meat fork obtained by Captain Bernard in Coronation Gulf is shown in Figure 77. It has four prongs, and the shaft is ornamented with incised crosses, parallel lines, and the ring-and-dot pattern. It might almost be mistaken for a peculiar kind of comb, but Captain Bernard stated that it was actually used as a fork.

SNOW KNIVES OF ANTLER AND BONE

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[192] To chop up the blocks of snow in the cooking pot, women frequently used a knife of antler, more rarely of bone, known as *hawiuyaq*, a light, roughly made tool, two specimens of which are shown in Figure 78. Many women, however, simply used the curved knife or *ulo* for this purpose.

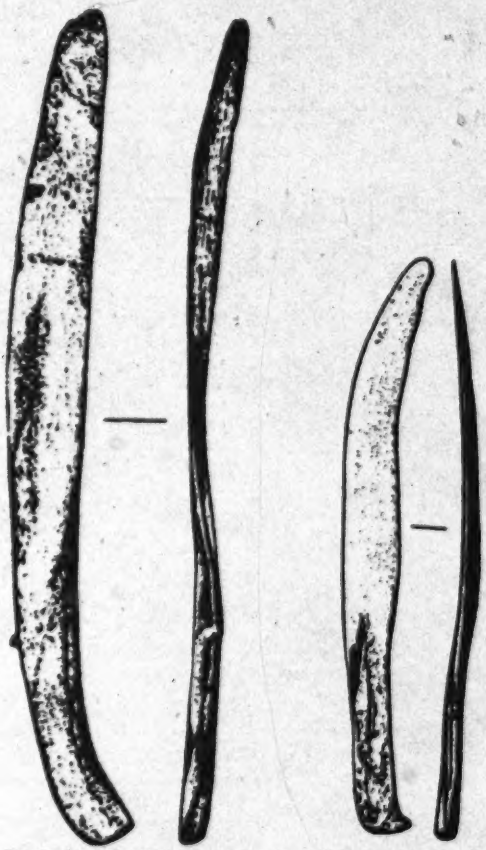

Figure 78. Antler knives for chopping snow. IV.D.188, 275. Approx. 1/2.

[171] These antler knives are identical with those used in the Hudson Bay area for scraping ice from kayaks, but the Copper Eskimo had little or no occasion [462] to employ them for this purpose. A woman sometimes used one to chop snow [342] for filling in gaps between the snow blocks while her husband completed the building of a hut, but even this was unusual.

SNOW SHOVEL

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Owing to the difficulty of procuring wood large enough for its manufacture, the snow shovel, which measured on the average 3 feet long by 18 inches wide, ranked with the table among the most precious possessions of the household. [422] Often a native, unable to obtain one plank of proper width, resorted to splicing, and lashed two boards, one broad and one narrow, side by side. The cracks [284] that developed in nearly all shovels were kept from spreading by similar cross-[356] lashings of rawhide, until the average tool had as many as six or eight "splices"

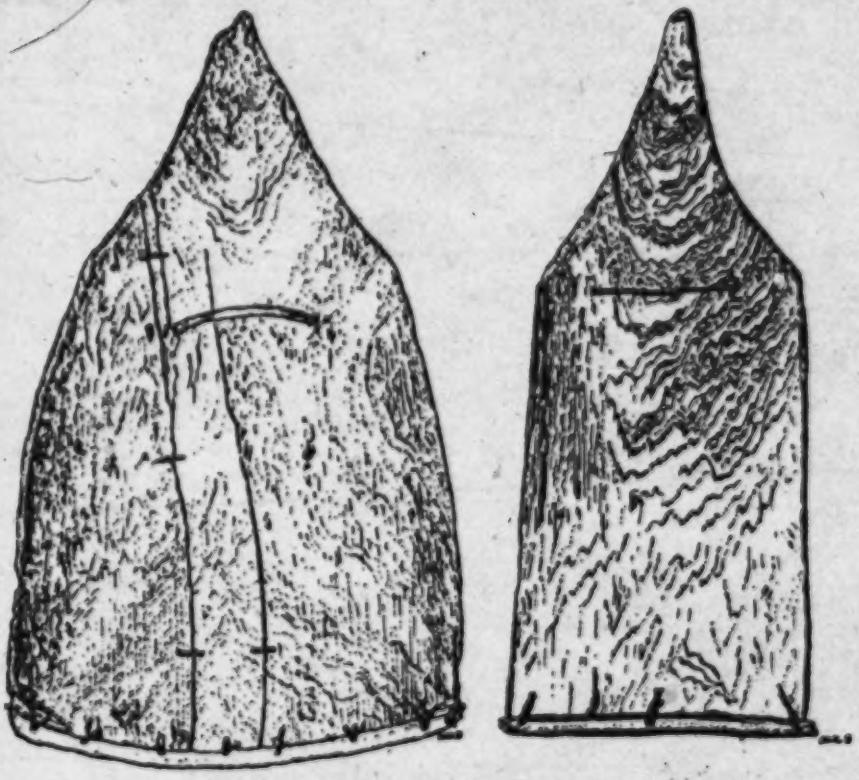

Figure 79. Snow shovels. IV.D.703, 1888. Approx. 1/8.

on its surface. At the bottom was an edging of bone (rarely ivory), securely [321] lashed to the wood through a number of holes; and about the middle of the face [284] was the handle, a half-hoop of antler pushed through two holes and pegged, or, more rarely, a strap of rawhide. Because this handle was liable to break through the wood, some natives strengthened the holes with bone gaskets. The general shape is illustrated in Figure 79.

SNOW DUSTER

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The snow duster, used for beating the snow from the clothes immediately before or after entering the snow-hut (and also for driving out the dogs), was merely a stick 2 feet or less in length, slightly curved, and carefully smoothed so that it would not tear the clothes, but not ornamented in any way. A typical specimen is shown in Figure 80.

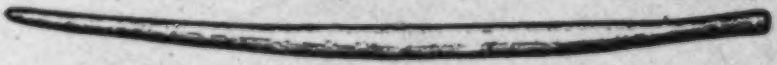

Figure 80. Snow duster. IV.D.1018. Approx. 1/3.

BAGS FOR CLOTHING

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The Eskimo kept their spare clothing in round or oval bags made of sealskin or caribou hide (Figure 81a). Caribou leg skins with the fur retained were preferred for the sides, and dressed sealskin for the bottom; but housewives used any material that lay to hand. Some of the round bags, which averaged about

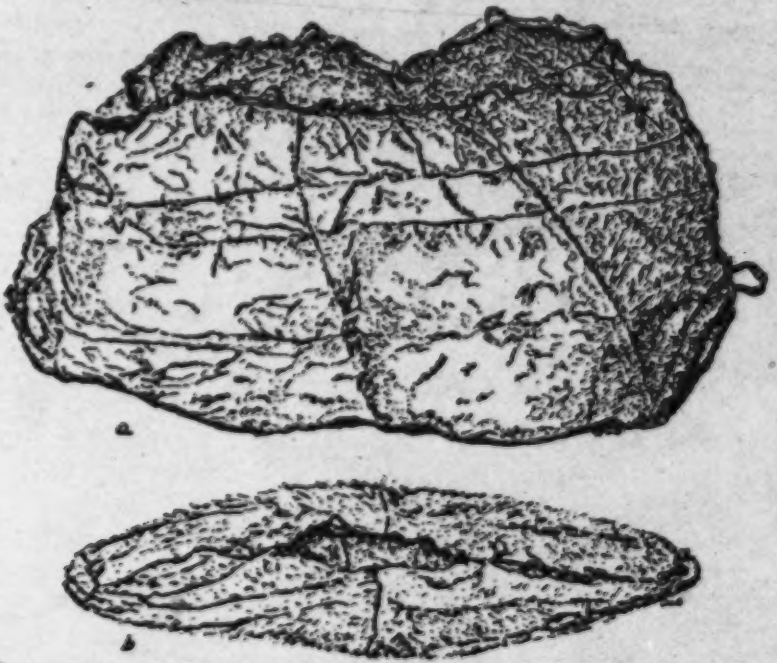

Figure 81. Bags for clothing. a: IV.D.66; b: IV.D.921. Approx. 1/8.

3 feet in diameter, laced across the top; others were tied with strips of skin extending from opposite sides, and fitted with strap handles of skin or plaited sinew to facilitate handling. The oval bag (Figure 81b) somewhat resembled

CHAPTER IV

TOOLS AND WEAPONS

WOMEN'S TOOLS

412 325 [321] *Knives.* All women's knives conformed to one general pattern (Figure 82). They had a more or less curvilinear blade, formerly of copper, now of iron, a handle of bone, musk-ox horn, or antler, and a tang-like connecting piece, nearly always of bone or antler and only rarely of copper, that was attached to the blade by copper rivets, and to the handle by being driven through a slot. The edge of the blade was almost flat, but it usually curved upward sharply at each end. One specimen had a copper tang of one piece with the blade, but in all other respects it conformed to the usual pattern. Modern knives have both blade and tang of iron, fastened together with iron rivets. [414]

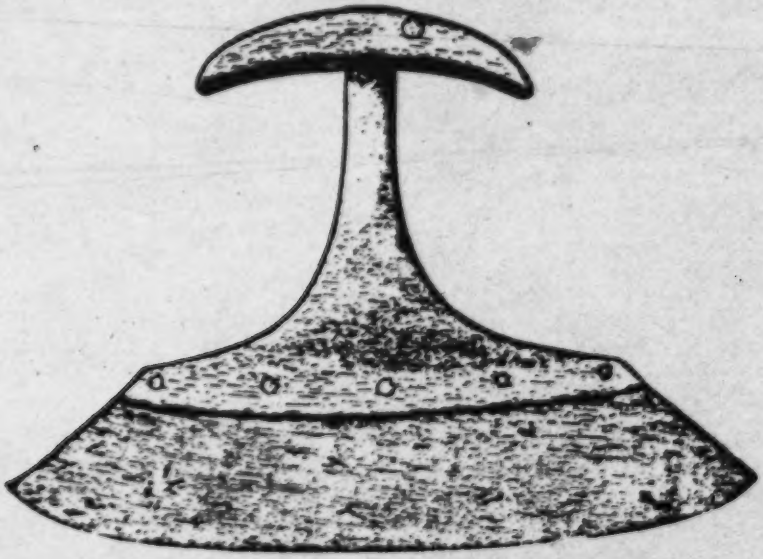

Figure 82. Typical woman's knife or ulo, with iron blade. IV.D.223. 2/3.

412 From Victoria Island two specimens were obtained that differed from all others we saw in actual use. One of them is illustrated in Figure 83. It has no tang, the upper corner of the blade, which forms almost a right angle, being driven directly into the bone handle; furthermore, the edge of the blade has a very marked and regular curve. The other specimen (IV.D.1381) is similar, except that the handle is of wood. Both have large copper blades, and from their appearance are quite new. I feel certain that they were made for sale,

I feel certain that they were made for sale, either by Copper Eskimos, or, more probably, by western Eskimos who entered their country after 1914. They correctly reproduce the tangless form of the women's knife still current in Mackenzie Delta and in Alaska, a form that was

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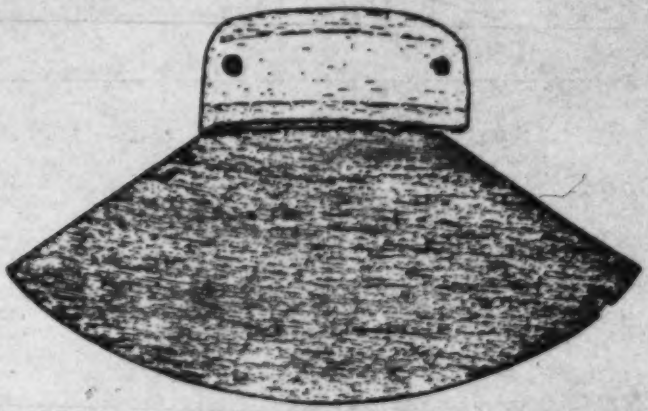

Figure 83. Tangless woman's knife, probably of western Eskimo origin. IV.D.1457. 2/3.

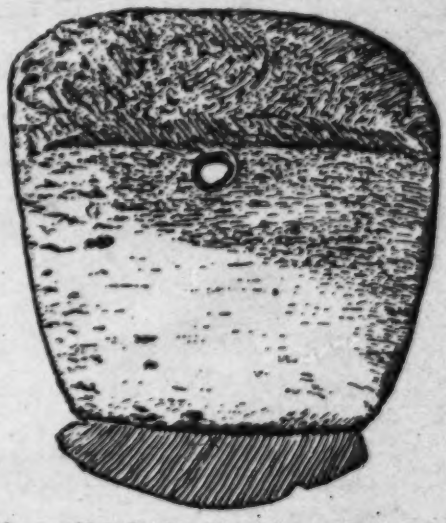

Figure 84. Knife with copper blade, found in old stone house on Victoria Island. IX.D.189. 1/1.

prevalent in prehistoric times in the Copper Eskimo region also, where, in addition to tangless, stone-bladed knives, two copper-bladed ones have been found, one in an old stone house on Victoria Island, the other (Figure 84) in a stone grave on the small Read Island in Dolphin and Union Strait.

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The Copper Eskimo evidently experienced considerable difficulty in accurately splitting the thin base of the tang longitudinally for the insertion of the blade. Hence the tang was sometimes merely tapered flat to fit one face of the blade, through which it was riveted to an added piece of bone or antler laid on the other face. Figure 85c, which illustrates a specimen picked up on a grave, shows how this was done. When the tang itself was of copper, as in Figure 85e, it could be riveted directly to the blade without the necessity for support on the other face.

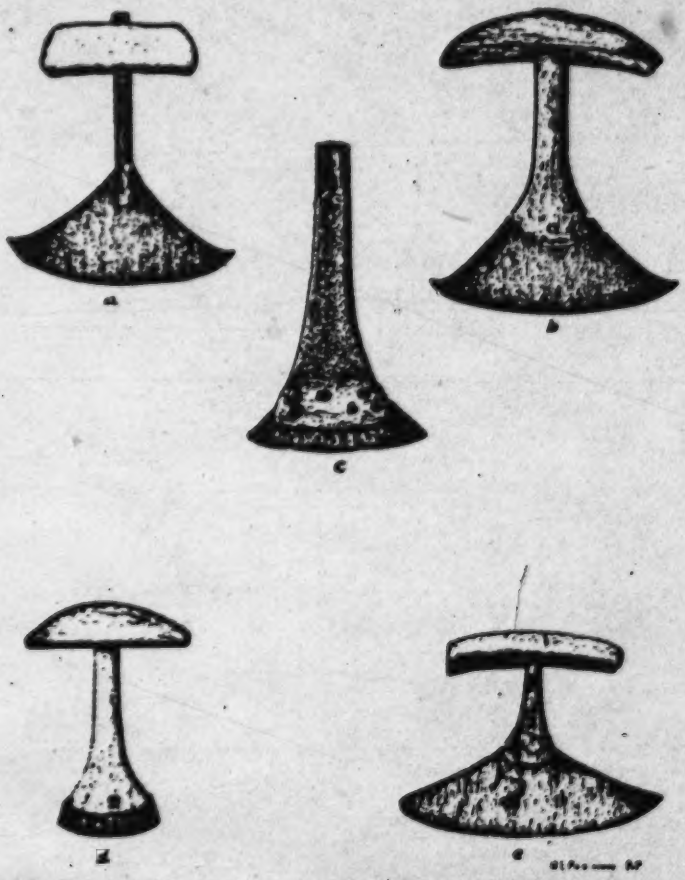

Figure 85. Women's knives, all but one (*c*) with iron blades, IV.D.518, 518, 572, IV.D.593; (*c*) with copper blade, IV.D.464. 2/3.

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Like several other Eskimo tools (e.g., skin scrapers), the women's knife was operated away from the body, thus enabling its user to see where she was cutting. The larger knives, which alone bore the name *ulo*, served for cutting

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meat; the smaller ones, which had a special name *qimalik*, for cutting and trimming skins. In shape, they were practically identical, except that the smaller tool often had a more rounded edge than the tool used for cutting meat.

Women's knives, like men's, often had sharpeners attached to them by a cord of sinew. The earlier sharpener was the tooth of some animal, often the molar tooth of a musk-ox or bear; or a whetstone made from sandstone or other gritty rock; or a stick of copper mounted in a bone or antler handle (Figure 86). By 1914, nearly every native was using a fragment from a file, or the firing pin of an old rifle. Men generally used their sharpeners as a butcher uses his steel, but the women held the steel in the left hand and ran the edge of the blade to and fro along its surface.

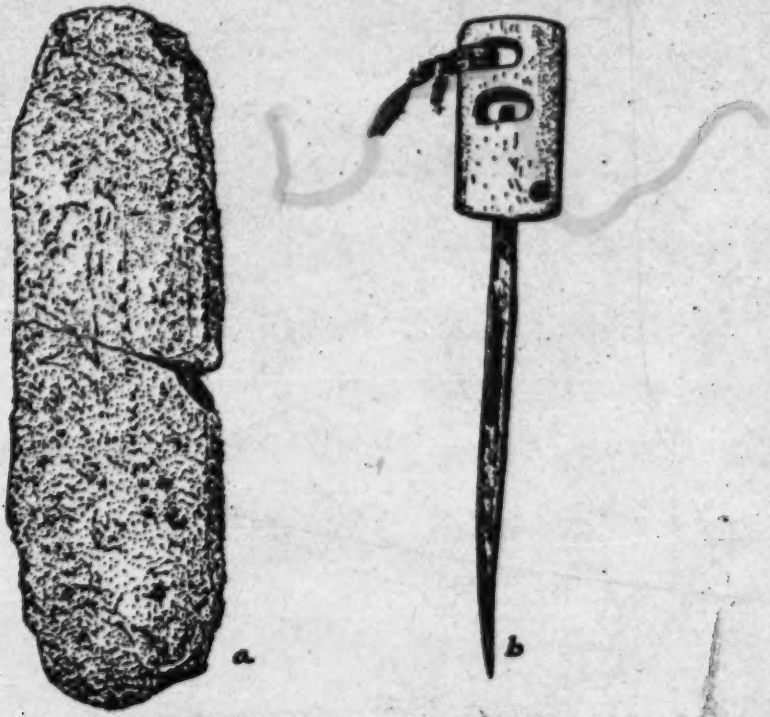

Figure 86. a: whetstone, IV.D.77; b: copper knife sharpener, IV.D.1381. 1/1.

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Skin Scrapers. The scraper used to remove the fat and inner tissue of skins had a small copper blade with a curved edge mounted on a long handle of antler. Today, in this as in other implements, iron has taken the place of copper. The handle was nearly always forked, the branch-prong preventing the hand from sliding forward. Most specimens had also a notch for the forefinger cut in the under side. Figure 87c shows a typical specimen; its iron blade is fastened by two copper rivets to the handle, which has been flattened on its lower face. Its prototype with a copper blade is shown in Figure 88.

412 When a pronged antler was not available, the natives often made an
321 artificial prong. Thus Figure 87b illustrates a copper-bladed scraper with an
325 antler peg driven into a handle of the same material; a groove on the under side of the handle seems to indicate that it was used as the top piece of a bow-drill. The workmanship in the specimen illustrated in Figure 87a is much more
[414] careful. This scraper also has a copper blade attached to its antler handle by means of copper rivets, and a well-made knob on the under side of the handle for a finger rest. The upper surface, however, has been neatly trimmed and fitted with a small pronged piece of antler, held securely in position with three pegs of the same material.

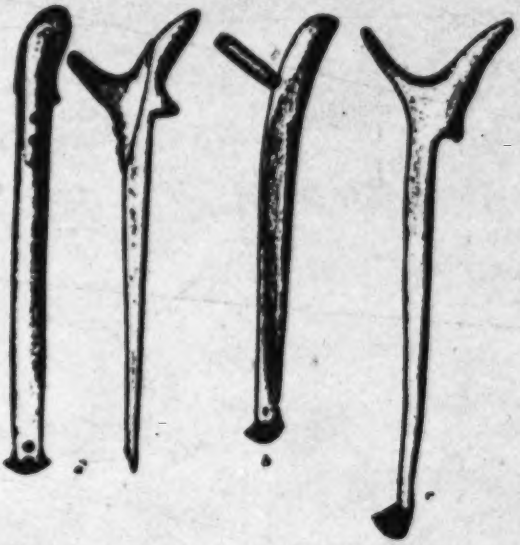

Figure 87. Skin scraper. a: IV.D.1619, and b: IV.D.1620, with copper blades; c: IV.D.443, with iron blade. Approx. 1/3.

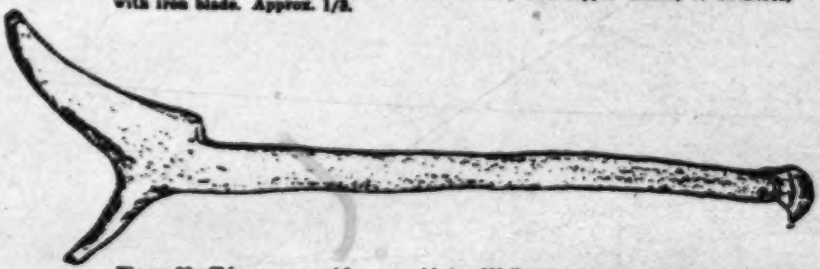

Figure 88. Skin scraper, with copper blade. IV.D.430. Approx. 1/2.

412 *Skin Stretchers.* There were two names for skin stretchers, *eqtoqsium* and
[192] *sku.gun.* The words are treated as synonymous in my notes, but it is more probable that each applied only to one of the two types that are described here. Some families possessed both kinds of stretchers, others only one.

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The first kind was made from the shoulder blade of the caribou or musk-ox trimmed to the shape shown in Figure 89. The blade was generally much larger and wider than in the second type, making it more suitable for large surfaces. Specimens ranged up to 14 inches in length.

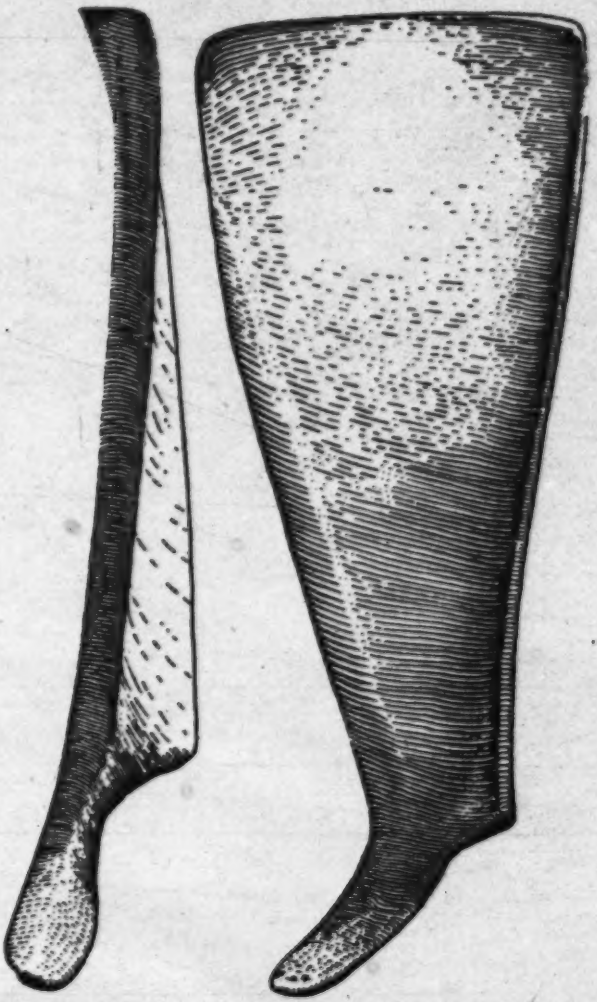

Figure 89. Skin stretcher, made from a shoulder blade. IV.D.178. 1/2.

The second kind was made from the leg bone of the same animals, which was either split all the way down the middle, or, more usually, bevelled off at

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its lower end. The upper end was usually knobbed or curved to afford a better grip. The edge of this type of stretcher was sometimes almost semicircular (Figure 90c).

There was a slight difference in the manner of holding these two types. In the stretcher made from a shoulder bone the thumb rested on the upper surface of the blade and the pressure on the hand was divided almost equally between the palm and the cleft between thumb and forefinger. In the stretcher of leg bone, on the other hand, it was the forefinger that usually rested on the blade and the friction came almost entirely on the palm.

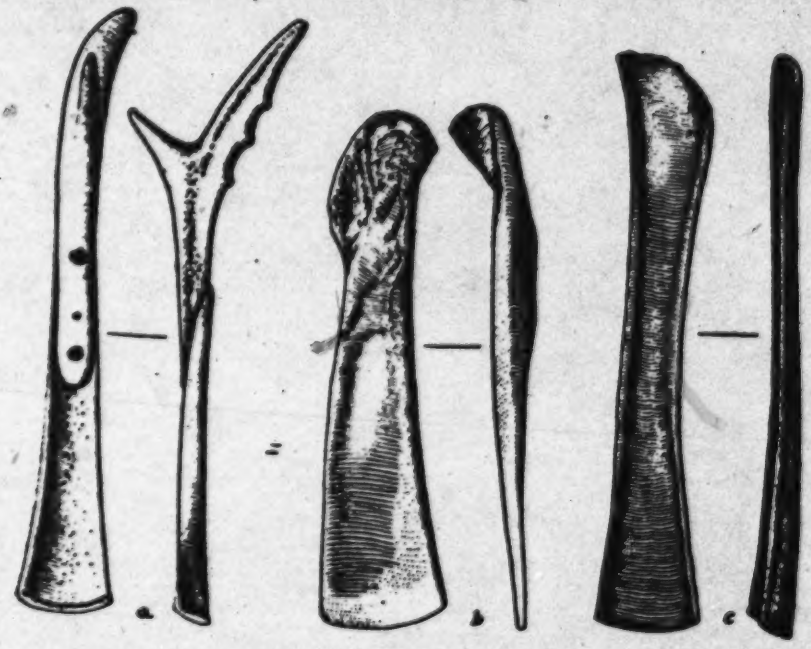

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Figure 90. Skin stretchers, made from leg bones. IV.D.1672. 264, 328. Approx. 1/2.

Figure 90a shows a very unusual specimen. The blade is made from the leg bone of the musk-ox, but in order to lengthen it and give a better grip it has been attached by copper rivets to a handle of antler such as is used for the skin scraper. Another unusual feature about this specimen is that the handle is grooved to fit the fingers, like the blubber pounder and the marline-spike for the bow. It was purchased in Coronation Gulf.

The specimen shown in Figure 90b has a number of holes drilled into the handle, both at the end and on one side, which are not visible, unfortunately, in the drawing. Two of them still retain traces of hide or sinew, indicating that the end was once covered with hide to protect the hand. Usually the worker simply wore a mitten, which had the same effect.

283 *Sinew.* All the sinew that I saw used for actual sewing came from the back of the caribou; the much coarser leg sinew was employed only for fishing

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415 very small, two of them, indeed, hardly more than an inch in diameter, serving no other purpose than to store one or two European needles. The larger baskets were sometimes provided with handles plaited square from four strands of the same willow bark.

415 Many women possessed no work-basket at all, but carried their sewing
412 gear loose; when moving from place to place they merely stowed it inside a bag, a mitten, or even the household cooking pot. Their outfit was really very limited; it comprised only a needle-case, a thimble and its holder, a small knife for cutting the skins, a small cutting-out board perhaps, some sinew, and a few scraps of skin for patches. The knife has been discussed already on page 80.

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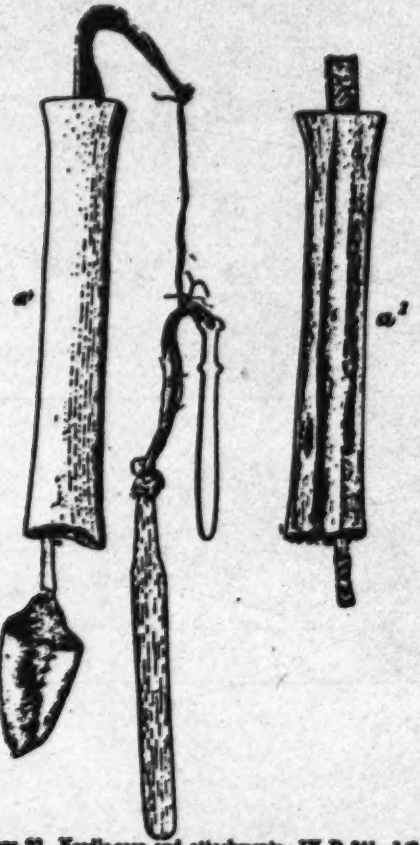

Figure 93. Needle-case and attachments. IV.D.341. 1/2.

321 *Needle-cases.* The ordinary needle-case was made from one of the leg
415 bones of a caribou, usually the carpal bone, which was split, trimmed to the proper shape with a whittling knife, and ground down and smoothed with a pebble (Figures 93-97). Exposure to the weathering processes of the atmosphere

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412 *Needles.* The Copper Eskimo seemed to have no recollection of bone sewing needles, but only of needles made from their native copper. They inserted them into a narrow strip of sealskin, or more rarely caribou skin, and drew them inside the needle-case for protection.

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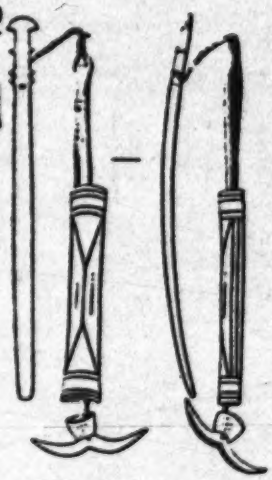

Figure 96. Needle-case and attachments, front and side view. IV.D.151. 1/2.

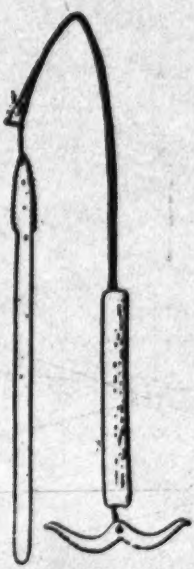

Figure 97. Needle-case and attachments. IV.D.336. 1/4.

Figure 98. Hunter's needle-case, from bird bone. IV.D.387. 1/1.

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412 Copper needles had practically disappeared when we visited the country, although a considerable number were made for sale. The few genuine specimens that I have seen were nearly square in section, from 2½ to 4 inches long, and with eyes drilled from both sides (Figure 99).[1] Iron needles, hammered out in the same manner as the copper ones, were still in common use, but as most of them were too large to enter the needle-case, they were kept by their owners in a separate strip of sealskin or in a bunch of matted moss roots.

412 *Thimbles.* There were two kinds of thimbles. One was simply a cap of sealskin to cover the tip of the finger (*See* Figure 93a); when not in use it was
[281] often attached by a short thread to the sealskin that contained the needles. The
[321] other and more usual kind was made from a small bone in the foot of the caribou, or sometimes from the horn of the musk-ox. In nearly all cases the upper end was open like a ring, because only the side of the thimble was used, not the top. One variety was equally broad all around, and had tiny holes pitted over all or part of the outer surface; another variety resembled a signet ring, except that the broad surface was worn in front, not behind, and that face

[1] The copper needles collected in Coronation Gulf by Hanbury in 1902, now in the British Museum, are square, as are also some iron needles that were collected by Rae in Repulse Bay 60 years earlier.

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alone was pitted with holes. With constant usage the pits soon perforated right through the bone, when the thimble, ceasing to protect the finger, was thrown away. When steel needles were introduced the wear on the thimble was much greater than with the soft copper needles; consequently, there was quite a demand for metal thimbles, which had the further merit of chafing the finger less than the old bone ones. The metal thimble was then often kept in a tightly fitting bag of skin or cloth tied to the skin containing the needles; but the old bone thimble had a special toggle that is described below.

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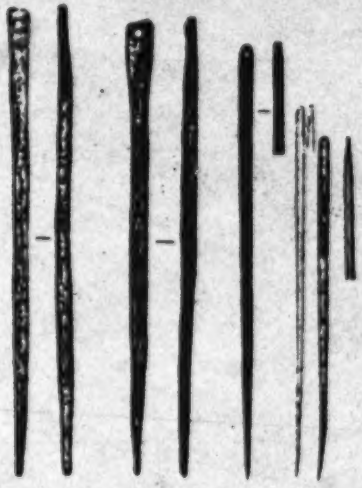

Figure 99. Copper needles. IV.D.329, 330. 1/1.

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A few thimbles are shown in Figures 100 and 101. Figure 100 illustrates the first stage in the manufacture of a bone thimble from a phalangeal bone of a caribou; Figure 101*c* gives the front view of what was perhaps the commonest variety, although this specimen is pitted on one face only; *b* is a side view of the signet-ring type; *a* is a thimble of musk-ox horn, closed at the top, possibly in imitation of European thimbles.

Figure 100. Unfinished thimble. IV.D.577. 1/1.

Thimble Holders. The thimble holder used with the open-topped bone thimbles was a small toggle made usually from the breast bone of a caribou (Figures 94-97). It always bore the same shape, which resembled somewhat the outstretched wings of a bird; but the length varied from 1½ to 3 inches. A small hole drilled through the middle enabled it to be tied with a sinew thread to the strip of sealskin containing the needles; the thimble merely slipped on over the toggle and dangled on the thread. The toggle provided also a very convenient handle for drawing out the needles, although its name, *tikivik* or "thimble-place", indicates that this was not its primary purpose.

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Pendants to Needle-cases. A marrow spatula was generally attached to the sealskin at the end opposite to the thimble holder to help in drawing the needles inside the case, and to prevent the skin from pulling right out; but sometimes the skin was merely left larger at this end, or carried a button, shaped like the

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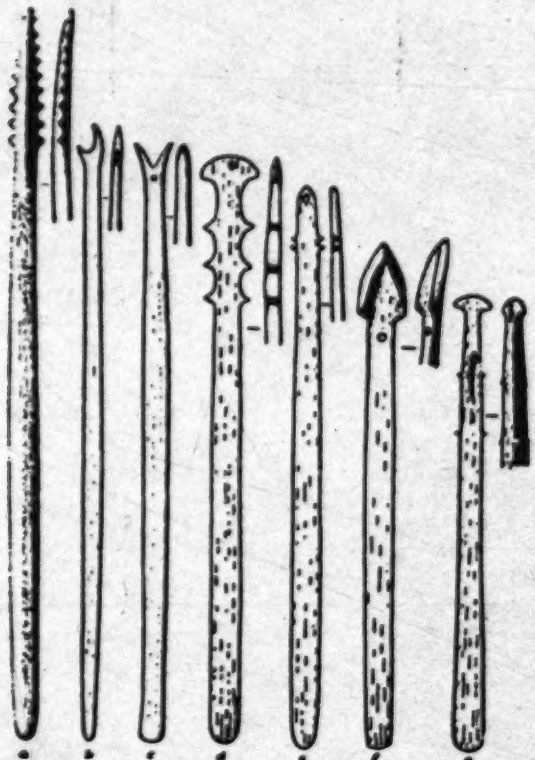
a b c

Figure 101. Thimbles. IV.D.[illegible], [illegible], 477. 2/1.



a b c d e f g

Figure 102. Bone marrow spatulas. IV.D.[illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible]. 1/2.

buttons on clothing. Other objects were occasionally attached to the needle-case, especially combs (*See* Figure 94). These articles were not essential to the outfit, but attached to it only for convenience or ornament. They are, therefore, discussed in other places.

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Cutting-out Boards. There was no special shape to the board (*qaorvik*) used for cutting and trimming skins, provided only that it was small and flat. The women often carried a board about 6 inches long in their sewing bags.

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Boot Creaser. A special implement, *tiguyaun*, "a tool to grasp", usually just a flattened stick of bone with a dull edge, was used occasionally to crease the toes of the white sealskin shoes. Most women, however, used the nail of the right thumb, and bestowed on it the magnificent name *kamitikaherutuk*, "my shoe-making tool".

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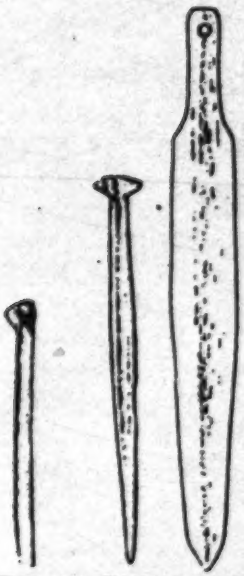

Figure 103. Threading needles. IV.D.898, 151. 1/1.

Figure 104. Scissors, with blades of hoop iron. IV.D.1612. 4/5.

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Marrow Spatulæ. Spatulæ for removing the marrow from the leg bones of the caribou and musk-ox were attached, as a rule, to the needle-case, or carried by hunters in the bags of their bow-cases. They varied greatly in shape, some showing a resemblance to meat skewers, others to marline-spikes; but they were less massive than the marline-spikes, and their flat, blunt points generally distinguished them from meat skewers. Nearly all were of bone, generally a caribou leg bone, but occasional specimens were of antler or even horn. The handle, drilled with a small hole when attached to the needle-case, was frequently carved into a small oval butt like the butt of the snow knife; or it was notched or serrated. There was rarely any etching of the surface, probably because the implement was too small.

A small assortment of spatulæ is shown in Figure 102. Specimen *f* in that figure is a very unusual form that would hardly have been identified as a spatula had I not seen it in actual use; it was attached to the needle-case of a

412 321 young girl. The specimens attached to the needle-case in Figure 93 are considerably shorter than the average. The commonest type was perhaps that shown in Figure 95, where it is also attached to its needle-case.

412 321 281 *Threading Needles.* Small bone needles were employed for threading a cord through holes in skin, especially for fastening together the front of a tent above the door. In form some of these needles were practically identical with many pins used for closing the blood bag, though the latter were usually longer and terminated in a greater variety of forms. Two threading needles are shown in Figure 103.

412 177 [439] *Scissors.* Probably as early as the middle of the nineteenth century the idea of using scissors for cutting the hair of the head came to the Copper Eskimo from Hudson Bay natives, who acquired European scissors in trade with the Hudson's Bay Company and with whalers. Copper Eskimo specimens of fairly recent date had tin blades mounted with copper rivets on bone or antler. The best example I have seen is illustrated in Figure 104.

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Figure 105. Bone awl. IV.D.1778. 1/1.

[281] *Awls.* To punch holes in skin the Copper Eskimo used any pointed tool that was handy, e.g., the corner of the woman's knife, an arrowhead, a sealing skewer, or, occasionally, a mere splinter of bone. Specially made awls were extremely rare, but a bone one from Cambridge Bay is illustrated in Figure 105.

MEN'S TOOLS

415 412 [224] Attached to the hunter's bow-case was a special tool bag to hold spare parts for the bow and arrows, meat skewers, and other implements connected with the chase. This bag naturally became the repository at times of other tools, such as the adze, that were not directly connected with hunting. However, most men

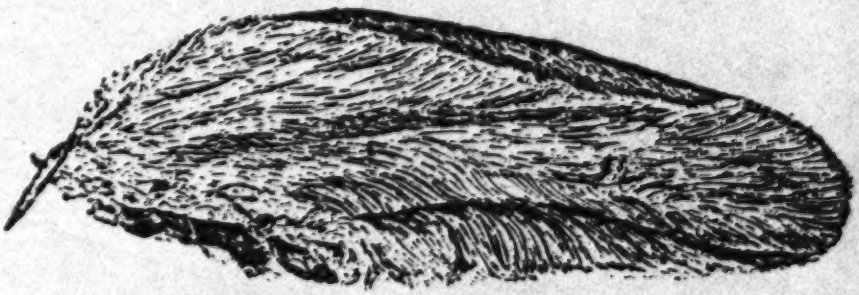

Figure 106. Man's tool bag of caribou fur. IV.D.726. 1/2.

owned a second small tool bag of caribou or other fur (Figure 106), and two or three had wooden boxes put together with iron or copper nails. Tools like the snow sounder and the ice chisel that were too long for any of these receptacles were generally stuck into the ground outside the tent, or into the wall of the snow-hut.

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Figure 107. Man's knife, with copper blade. IV.D.1458. Approx. 1/4.

Knives. The oldest Copper Eskimo knives of which there is any record had large copper blades, lanceolate in form and sharp on both edges. Generally the blade had a tang, which was driven into an antler handle without being riveted, but occasionally there was no tang, the blade being set in a slot and secured with a single copper rivet. The handle was sometimes of two pieces, spliced together and riveted with copper or bone pegs, and the butt was a separate piece of bone, or sometimes musk-ox horn, pegged to the handle. A lashing of sealskin or willow root, which began through a hole in the butt and was wrapped around most of the handle, afforded a better grip than the smooth antler; its loose end passed through another hole and was tucked under one or more bights. A short loop of sealskin was often added in the side of the handle so that the knife could be hung on a button of the coat, or attached to a toggle on the bow-case (Figure 107).

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An excellent specimen of such a knife, collected by Captain Collinson at Cambridge Bay in 1852, is now in the Pitt-Rivers Museum at Oxford, England. Another specimen, with a rather shorter blade, collected by Lieutenant Singleton, of H.M.S. *Fox*, from an unknown locality, is in the Horniman Museum, Forest Hill, London. Others, collected by either Collinson or his colleague McClure on Victoria Island, are desposited in the British Museum. These are the oldest specimens known to me from the Copper Eskimo region. Hanbury collected several similar knives in 1902 between Ogden Bay and Coppermine River, some of which are also in the British Museum.

Even in the nineteenth century a considerable amount of iron found its way into the Copper Eskimo country and was utilized for knives. Figure 108 shows a knife made from iron secured from McClure's ship, the *Investigator*, which was abandoned on Banks Island in 1851. The blades of these early iron knives correspond as nearly as possible to the copper ones; they were lanceolate, and hammered thin on both sides toward the edges. However, early in the twentieth century, European steel knives began to drift in from the south and southeast, and soon afterwards more knives and a quantity of iron entered the country from Great Bear Lake and from the west. The natives then removed the handles from the European knives and mounted them according to their own fashion; but often they left the shape of the blade intact. Accordingly, one found iron-bladed knives that had one or both edges sharp, or else half the back edge sharp and the other half blunt. These iron blades, also, were generally mounted in a slightly different manner from the old copper knives; their tangs were riveted between plates of iron that were riveted in turn to the antler handles.

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Figure 108. Knife, made of iron from McClure's ship *Investigator*. IV. D.418. 1/2.

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By 1914 hardly a single copper-bladed knife remained in the country, except specimens that had been manufactured for sale to the first traders, like those shown in Figure 109. All the Copper Eskimo were using iron knives of various sizes and shapes, some with small blades and long handles, others with long blades and short handles, some single-edged and some two-edged (Figure 110). Specialization in types was beginning. For cutting snow, knives with long handles and long blades were accounted the most useful; for skinning caribou and seals, knives with shorter handles and blades of medium length. Some natives still preferred two-edged knives for skinning, others liked a sharp point, curved back, and a blunt back edge, as in the European hunting knife. Many men made still smaller knives for miscellaneous uses around the camp. A certain number of small knives with copper blades may have been used even in the earliest days,[1] but all such specimens that I have seen, whether of iron or copper, date from the twentieth century, and the copper ones were made to sell to Europeans. Certainly the commonest type of knife in pre-European days, perhaps the only type outside the whittling knife, was the large lanceolate form commonly called the snow knife.

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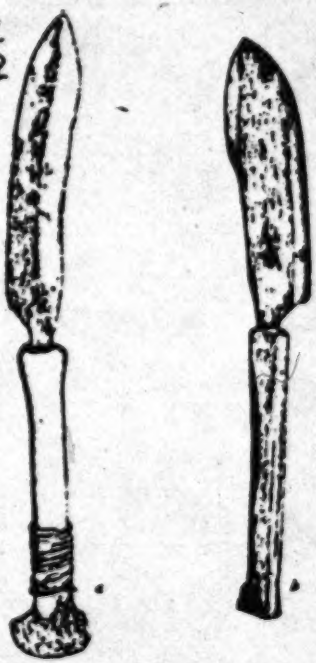

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Figure 109. Copper-bladed knives made for sale. *a*, IV.D.1381, 1/2; *b*, IV.D.243, approx. 1/2.

The older Thule inhabitants of the region, like those to the west and east, used a large, curved snow knife, nearly always made from whalebone. Figure 112 (IV.D.1660), however, shows a specimen obtained by Capt. J. Bernard in Coronation Gulf that is made from musk-ox horn. The local Eskimo knew its purpose, but had no recollection of ever using such a tool themselves.

Whittling Knives. Typical whittling knives (*haviro.n*) with iron blades are shown in Figure 113. Copper was used for the blade in early times, but I was able to obtain only two examples, one of which is shown in Figure 114. Here, as often with the iron-bladed whittling knives, the handle is perforated half-way along its length for the attachment of the sharpener, which was usually of steel, but in this case a small copper pencil mounted in an antler handle.

Figure 113*a* shows a fairly old specimen with a tiny blade of what seems to be hoop iron; the handle, as usual, is of antler, and the rivet in this case of copper. In the specimen represented in Figure 113*b* the handle has been extended by splicing a short additional piece of antler. The same thing has occurred in the specimen shown in Figure 113*d*, but such extensions were less usual among the Copper Eskimo than among the Eskimo to the west.

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[1] In 1929 Mr. Lincoln Washburn obtained a handleless copper knife blade (Figure 110) that had been picked up on Victoria Island. One surface only was covered with a green patina; the other was still coppery, though dulled. Probably the specimen is not of great age.

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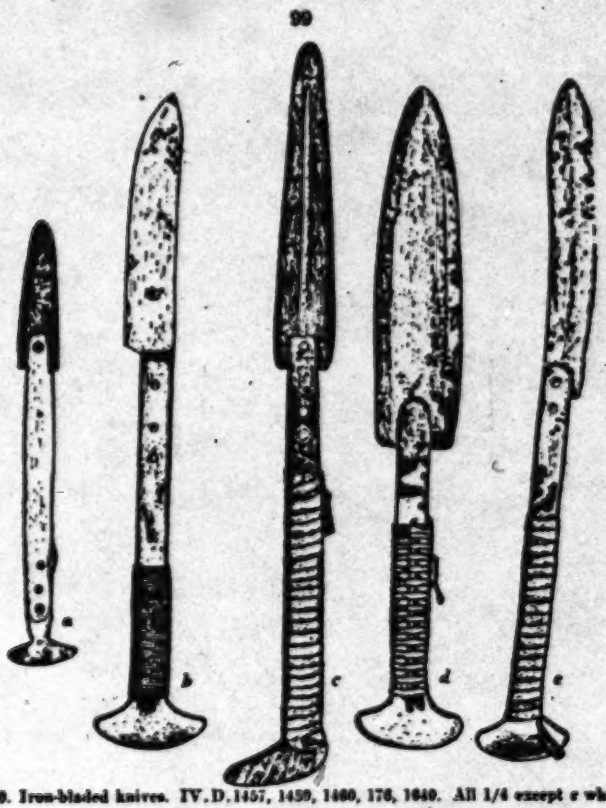

Figure 110. Iron-bladed knives. IV.D.1457, 1459, 1460, 176, 1640. All 1/4 except *c* which is 1/2.

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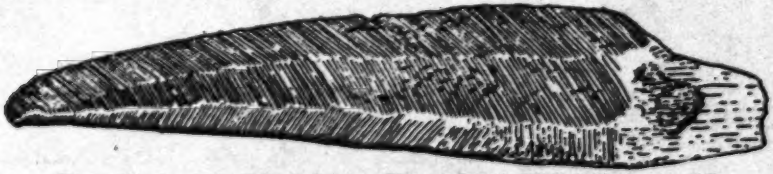

Figure 111. Copper knife-blade found on Victoria Island. IV.D.1817. Approx. 1/1.

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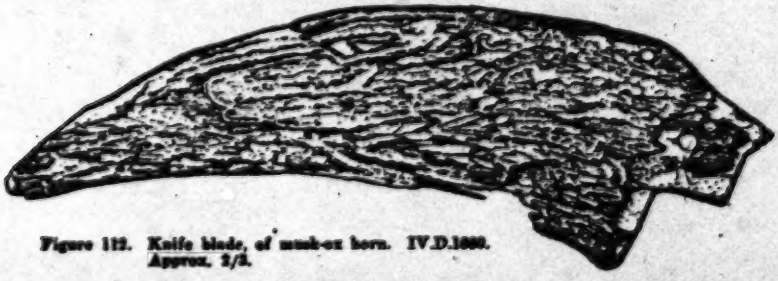

Figure 112. Knife blade, of musk-ox horn. IV.D.1660. Approx. 2/3.

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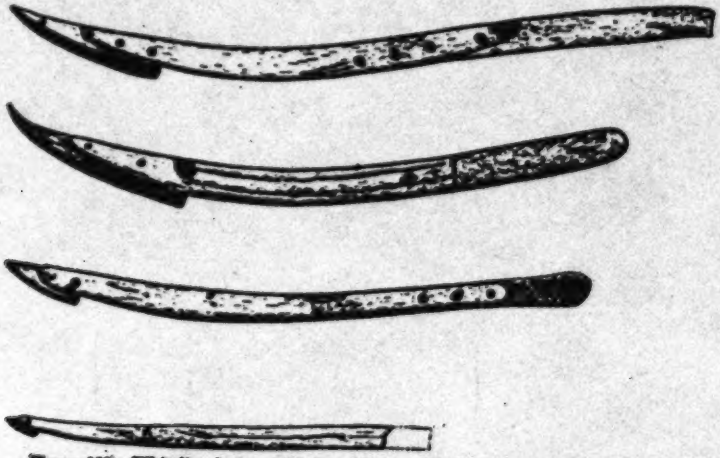

Figure 113. Whittling knives with iron blades. IV.D.1618, 172, 1468, 1389. 1/4.

Figure 114. Old whittling knife with copper blade and copper sharpener. IV.D.1670. Approx. 1/2.

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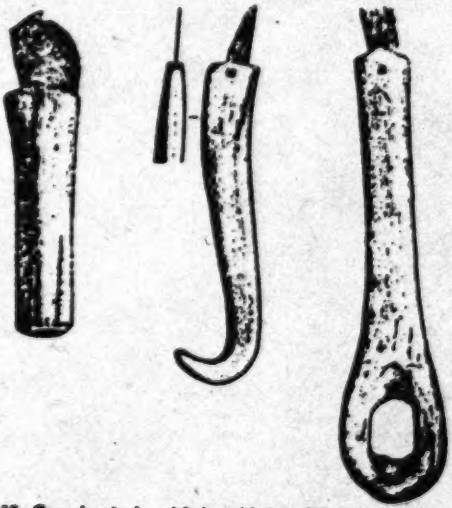

Figure 115. Grooving tools, with iron blades. IV.D.700, 1024, 722. 1/2.

The method of using the whittling knife in Coronation Gulf and westward differed from the Greenland method described by Porsild.[1] The Copper Eskimo held the knife low down with the hand directed inward, and the handle resting along the inner side of the forearm so that it fitted into the curve of the elbow. With the instrument thus pivoted on the elbow the forearm moved as one unit and the wrist remained perfectly still. Smaller whittling knives, even though their handles did not reach the elbow, were held in the same manner.

Grooving Tool. The Copper Eskimo had a tool for cutting grooves in bone, antler, and horn similar in shape to the tool used by other Eskimo tribes. The blade, which was nicked at the end or else bore a sharp, pointed projection, was mounted in an antler handle of no particular shape. Sometimes the handle was split for the insertion of the blade, sometimes the blade was simply driven in with a stone, and riveted or not according to the owner's fancy. Figure 115 shows three specimens of the tool, all from Coronation Gulf; but Figure 115c is really a combination tool, because its handle served also as an arrow straightener. All three specimens have iron blades, as indeed did every grooving tool I saw in the country. Whether copper or stone preceded iron in this case I did not discover.

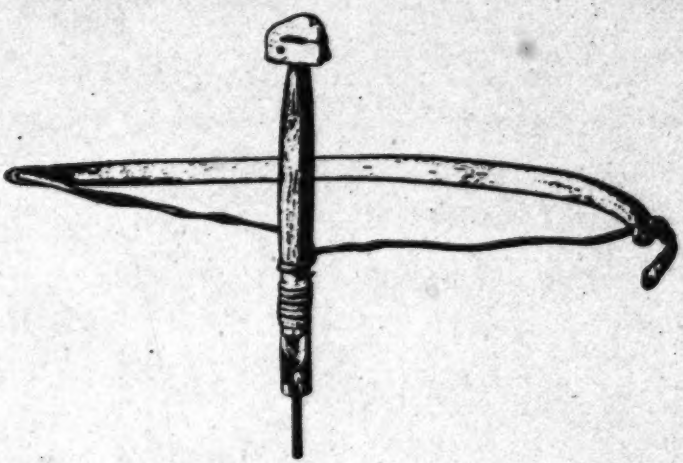

Figure 116. Drilling set. IV.D.704. 1/3.

Drilling Sets. The Copper Eskimo used the three-piece drilling set found among other Eskimo tribes (Figure 116). The bow was of bone, generally the rib of a musk-ox or caribou; a hole was drilled in each end for the attachment of the sealskin cord. The stem or spindle was nearly always of wood, though bone was used occasionally and ivory when it was procurable. To prevent the wood from splitting, a bead of bone, antler, or musk-ox horn was added to it, either as a cap or by splicing. All the drills I saw had points of iron, which had long been current in very small quantities; copper perhaps was used earlier, and stone, although the natives seemed to have no recollection of the stone drill points.

[1] Porsild, M. P.: Studies on the Material Culture of the Eskimo in West Greenland; Meddelelser om Grønland, vol. LI, p. 188.

412 321 325 [324] The most common mouthpiece was the astragalus of the caribou, though any piece of bone or antler, and even soapstone (Figure 117), might be shaped to serve the same purpose. When a man lacked a mouthpiece he often used the handle of his whittling knife or some other implement. The astragalus has a natural cavity of convenient size, but the rim is low on one side and the end of the spindle liable to slip out; consequently, a bone or metal peg was often inserted to raise the level of the rim in this place (Figure 118). Sometimes a small plate of copper or iron was driven into the bottom of the cavity through one side to give a hard, smooth base for the rotating spindle. The latter feature may be of modern origin, but I am inclined to favour its antiquity on account of the number of specimens in which it is found, and the analogous stone sockets in other regions.

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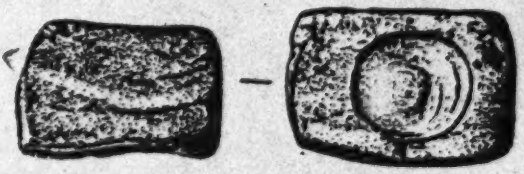

Figure 117. Mouthpiece for drill, of soapstone. IV.D.1678. 3/2.

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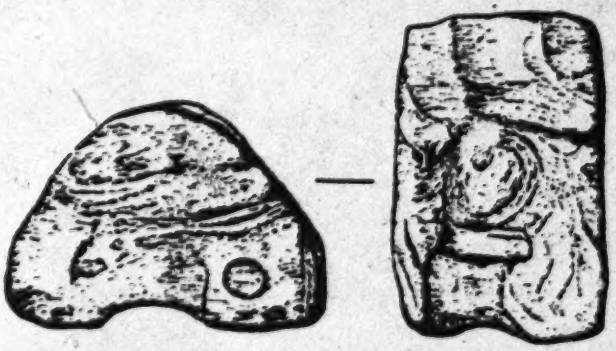

Figure 118. Mouthpiece for drill, made from caribou astragalus. IV.D.298. 3/2.

412 325 322 *Adzes.* Hearne gives the following description of Copper Eskimo adzes. "Their hatchets are made of a thick lump of copper, about five or six inches long, and from one and a half to two inches square; they are bevelled away at one end like a mortice-chisel. This is lashed into the end of a piece of wood about twelve or fourteen inches long, in such a manner as to act like an adze: in general, they are applied to the wood like a chisel, and driven in with a heavy club, instead of a mallet. Neither the weight of the tool nor the sharpness of the metal will admit of their being handled either as adze or axe, with any degree of success".[1]

[114]

[1] Hearne's *Journey from Prince of Wales's Fort in Hudson's Bay to the Northern Ocean*, edited by J. B. Tyrrell. The Champlain Society, Toronto, 1911, p. 191. Hearne, it should be noted, did not use these "adzes" in use. I suspect, indeed, that they were not adzes, but ice chisels.

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By the twentieth century almost every adze was equipped with a blade of iron; only a few retained blades of copper, which were mounted on antler, not wooden, handles, and applied in the ordinary way, not "like a chisel, driven in with a heavy club". Sometimes the blade was lashed directly to the handle, sometimes wedged into a separate head of bone, antler, or musk-ox horn. Examples of both methods are shown in Figure 119.

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Figure 119. Adzes. b, with copper blade; a, c, d, with iron blades. IV.D.1630, 1476, 1625, 1629. 1/4.

Figure 119b is an old specimen from Coronation Gulf that has a copper blade lashed with a thong of sealskin directly to the antler handle, the top of which is hollowed to a V-shaped groove to prevent the blade from slipping over the side. The end of the blade was originally wrapped in sealskin to protect the lashing, but the sealskin has worn away on the sharp edges, though it still remains on top and bottom. The handle has four holes for the lashings.

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Figure 119*d* shows a similar specimen with a heavy steel chisel for a blade. Here, both the upper and lower surfaces of the lashing have been protected with sealskin, and the antler handle has only one large hole.

Figure 119*a* has a steel blade (part of a file) driven into a head of musk-ox horn; the end was wrapped in sealskin to wedge it securely in the socket. Five holes are drilled in the horn head, two in the handle to receive the lashing, which, as always, is of sealskin.

Figure 119*c*, which also has a steel blade, is mounted in a bone head without wedging. The head is not drilled for the lashing, but has a wide groove that answers the same purpose. The antler handle has only one large hole.

412 321 172 [171]

Mattocks. Mattocks or picks of heavy bone or antler, mounted on handles like adzes, occur only as relics of the earlier whale-hunting population. Numerous specimens were noted in the ruins at Cape Kellett, on Banks Island, and one of whale rib, much weathered, was found without its handle near Forsyth Bay on Victoria Island (Figure 120). The local natives guessed its purpose correctly, though they had never seen one in use. In pattern it is identical with the mattocks I dug up at Barter Island, in northern Alaska, and with specimens from the "Thule" culture remains in Hudson Bay region.

412 321 [172]

Figure 120. Old mattock of whale rib, found on Victoria Island. IV.D.227. 1/3.

Figure 121. Mattock or pick of antler. IV.D.233. 1/4.

The typical mattock of the Copper Eskimo was simply an unmounted caribou antler with sharpened point, butt crudely shaped to give a grip, and, rarely, a projecting foot as on the handle of the man's knife (Figure 121). Any large antler, curved or straight, served the purpose, and some specimens were

hardly distinguishable from the antler knife used by the women for chopping snow; but a curving prong in which the point formed nearly an acute angle with the handle made a more efficient tool (Figure 122).

Figure 122. Curved pick of antler. IV.D.1634. 1/4.

Mattocks were seldom required except for two purposes, to secure, in the autumn, mud for plastering the runners of the sleds, and to make shallow pits where the hunter could await unseen the approaching caribou. Some families had no mattocks, but no hunter's equipment was quite complete unless he carried a short straight one in his bow-case. In fact, the usual name for a mattock was *tullulit*, i.e., a tool for making a *tullu* or hunting pit.

Snow Sounder. The main purpose of the snow sounder was to test the depth and compactness of snow with a view to the construction of a snow-hut. Hunters used it occasionally to probe the breathing holes of seals.

The implement was a straight, slender rod of antler[1] roughly 3 feet long, usually shod at the bottom with a peg of bone or musk-ox horn. The handle, of bone or musk-ox horn also, nearly always took the form of a round button drilled to fit the top of the rod (Figure 123). Figure 124, however, shows a specimen with a more elaborate handle.

FISHING EQUIPMENT

Copper Eskimo methods of fishing have been described in Reports of the Canadian Arctic Expedition, 1913-18, vol. XII, pages 152-157.

Rods, Hooks, and Lines. There were two types of fishing rods. The first was a short stick from a foot to 18 inches long, curved at one end to form a handle, and notched at both ends to wind up the line. The Eskimo often had some difficulty in securing suitable wood for this kind of rod, wood that would bend without cracking. Hence, they frequently spliced two pieces of wood together, or a stick of wood to a handle of antler; or they even made the rod entirely of antler. With dry wood, too, the notches were very liable to break,

[1] Stefansson obtained a very unusual rod of solid copper (Anthrop. Papers, Am. Mus. Nat. Hist., vol. XIV, pt. 4, p. 98 (New York, 1919)).

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especially the lower arm of the front notch, which carried the weight of the line; consequently, this notch was often built up by splicing a short projecting piece of wood to the under side of the rod. Sometimes a bone pin was inserted about the middle of the rod, on its upper surface, for shortening the line a little; for in shallow lakes the line was lowered until it touched the bottom, then raised a few inches with a turn around this pin, and fastened with a half hitch to the lower arm of the front notch.

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The second type of fishing rod was simply a straight stick also notched at each end. Usually it was a little longer than the curved variety and was especially favoured for cod fishing, though no great distinction was made between the two kinds.

Both types of rod, with all their attachments, are shown in Figures 125 and 126.

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Capt J. Bernard discovered an ancient rod of antler (Figure 127) in an old stone house on Bell Island, off the southwest coast of Victoria Island. It closely resembles Copper Eskimo specimens, though the house itself must date from the earlier Thule culture. I do not know the purpose of the holes drilled in each end.

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The common line for these rods was a stout 3-ply cord, plaited from caribou leg sinew. It varied greatly in length, but generally ran from 35 to 60 feet. The upper end was fastened in different ways, sometimes with a few half hitches around the front of the rod, sometimes by a knot at the back end; the lower end was attached to the sinker, not to the hook, because the sinker and hook were riveted together.

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For tomcod fishing in winter the western Copper Eskimo preferred a line of baleen to a sinew line, because the latter became encrusted with ice and was easily broken. These baleen lines, which could be quite short, were naturally commonest around Dolphin and Union Strait; natives farther east, who seldom or never saw a stranded whale, obtained them only by trade.

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The sinkers were of bone, antler, or musk-ox horn, most often the first two. There were two types, one for use with a comparatively small hook when fishing in the lakes for trout and salmon, the other for use with a very much longer hook for catching cod.

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The former type of sinker was usually from 1 to 2 inches long, oval in outline, flat on one face and rounded on the other. Most of them had two holes drilled through the upper end, one below the other. The end of the line then passed twice through both holes, forming a double-stranded noose, and was plaited back an inch or two from the sinker, where it was bound occasionally

Figure 123. Snow sounder. IV.D.1084. 1/4.

Figure 124. Snow sounder with unusual handle of musk-ox horn. IV.D.118. 1/8.

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The implement consisted of two long copper hooks driven through a piece 321
of antler at the end of a pole 4 or 6 yards in length (Figure 135). The antler, 325
bevelled off in the usual manner, was pegged to the shaft with bone or antler pins, and occasionally further secured by a sealskin lashing. The majority of

Figure 135. Fish rake with two copper prongs. IV.D.631. 1/3.

Figure 136. Fish rake with one copper prong. IV.D.603. 1/2.

Figure 137. Ice chisel, of copper set in antler. IV.D.1202. 1/4.

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rakes had two hooks from 6 to 9 inches long, but a few had three hooks and others only one (Figure 136). Wedges of bone, antler, or copper were sometimes used to prevent the hook from pulling out.

Ice Chisels. Figure 137 shows a typical chisel used to drill through ice for fishing, or to obtain drinking water. The blade is of copper, oblong in section, and bevelled to an edge on one of its narrower faces. The fore-piece is of

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412 antler, trimmed in front like a collar, and whittled down at an angle behind to
321 fit a long wooden handle. In this specimen the handle was attached by two bone pegs (which are still in position), supplemented by a sealskin lashing. In other specimens, especially the smaller ones, there was only one peg, and occasionally none at all, if the owner wished to use the same handle on his ice scoop or other implements. Apart from the number of pegs there was little or no variation in shape.

412 For several years after iron became readily available some of the Eskimo
325 still preferred their old copper ice chisels, because in shallow lakes the edge was often dulled through striking against the stones on the bottom, and copper was easier to hammer and grind into shape again than iron. The Copper Eskimo
[321] had no recollection of bone or ivory ice chisels, though their harpoon carried a pointed butt of bone or antler for planting the weapon upright in the snow.

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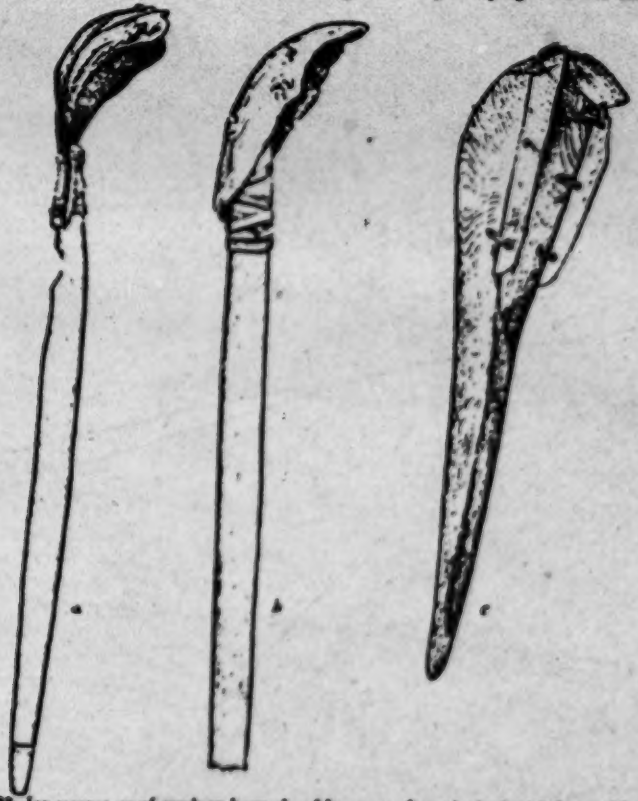

Figure 138. Ice scoops; a: of musk-ox horn; b: of bone; c: of wood edged with bone. IV.D.128, 179, 224. Approx. 3/10.

412 *Ice Scoops.* A common shape for the scoop used in clearing out the hole
321 made by the ice chisel is illustrated in Figure 138c, which shows a wooden ladle
322 with a "free-board" of bone attached by thongs of both sinew and sealskin around the rim of the bowl. Some of the holes not filled with the lashing have
284 been plugged with wood.

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Because many natives experienced difficulty in obtaining a piece of wood large enough to carve into a bowl, they often substituted a curved piece of bone or of musk-ox horn, lashed to a wooden handle. Specimens of these more or less makeshift scoops are illustrated in Figure 138, where *a* (IV.D.135) has a bowl of musk-ox horn, and *b* (IV.D.179) of bone. The handles of such scoops could be lengthened, if necessary, by lashing to the walking-stick or fish spear, for which purpose their owners often cut notches at the ends.

SEALING EQUIPMENT

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In the spring and autumn, when the seals were basking on the surface of the ice, Copper Eskimo hunters occasionally tried to crawl near enough to transfix them with their harpoons; but so slight were their chances of getting within range—unless perhaps in rough ice where there were sheltering hummocks—that most men never attempted the feat until they obtained rifles, which extended the effective distance for attack from 8 or 10 yards to 100 yards. Every man, on the other hand, and even some of the younger women, regularly tracked down the seals' breathing holes in the ice during the winter months and harpooned the animals when they rose to the surface. In midwinter, when the days were short, they started out for their hunting grounds half an hour before dawn, and did not return home until after dark. Their outfit was fairly standardised, though not always complete. Each man wore a long outer coat of thick caribou fur to protect his body from the cold. Sewn to the back of this coat was a bone button (*See* Figure 37) for the attachment of various tools, viz., a scoop to clear away the snow, bone skewers for closing the wounds in the seals, a toggle to drag them home, a spare harpoon head, and sometimes a foot-pad to protect the hunter's feet as he waited motionless, 1, 2, or even 3 hours, over the breathing hole. In his hand he carried his harpoon, the usual long, two-edged knife, and an "indicator" to warn him when a seal was rising to breathe; and from one wrist hung a special toggle that he attached to the trace of his dog. His method of hunting is described in "Life of the Copper Eskimos", Reports of the Canadian Arctic Expedition, vol. XII, pt. A, pages 112-114; here we need consider only the details of his tools and weapons.

Harpoons. The harpoon was roughly the height of a man, or from 5 feet 6 inches to 6 feet long; and it varied only in minor details (Figure 139). It contained essentially four parts—a shaft, usually of wood, but occasionally of two or more pieces of antler riveted and lashed together; a bone or antler (very rarely, copper) foreshaft that fitted into a hollow bone cap at the end of the shaft; a detachable head with a long hand line of plaited sinew;

Figure 138. Sealing harpoon. *a*: wooden shaft; *b*: bone socket-piece riveted to the shaft with copper nails; *c*: antler foreshaft; *d*: antler head; *e*: copper blade; *f*: antler butt; *g, h*: sinew from hand line tucked under the thong that runs along the shaft, the thong itself being held down at this point with a copper staple; *i*: hand line of braided sinew; *k*: grip of hand line. IV.D.084. 1/10.

Scoops. The scoop (*ilaun*) (Figure 144) used for clearing the snow from the breathing hole of the seal had an average length of 1½ feet, and was made of musk-ox horn, mounted on a handle of horn, bone, antler, or wood. The two parts were generally spliced with a V-shaped notch, rarely by bevelling the ends and overlapping; pegs of copper or bone, and lashings of sealskin or sinew, held them firmly together. A small loop enabled the tool to be attached to the coat button; usually it passed through two holes in the handle and the ends were either tucked under the lashings around the splice or knotted. The handle tapered to a rounded point with which the hunter stabbed the eye of the seal when it was drawn to the surface. 412 225 321 284

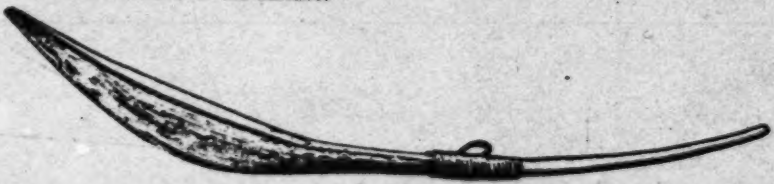

Figure 144. Scoop for sealing, of musk-ox horn. IV.D. 333. Approx. 1/4.

Indicators. The seal indicator and its use have been described in Reports of the Canadian Arctic Expedition, vol. XII, pt. A, page 113. Figure 145 illustrates the commoner type, the pencil of bone slightly more than a foot long, with the small bone disk at the bottom and the cord leading away to the needle that was pegged into the snow. Often, but not always, the top of the pencil, perforated for the cord, was made of a separate piece of musk-ox horn, neatly drilled, that fitted like a cap. During our residence in their territory a few natives experimented with indicators made, not from bone, but from the steel springs of some old rifle bolts; how effective they were I cannot say. 412 225 [321]

For drawing up this indicator a few sealers used a fine hook of copper lashed with sinew to a short bone handle; a specimen is shown in Figure 146.

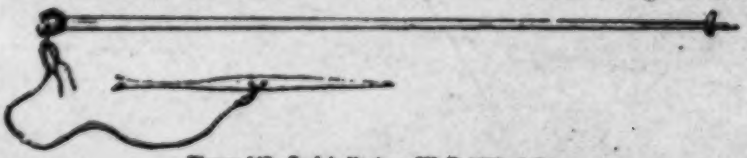

Figure 145. Seal indicator. IV.D.1318. 1/2.

Figure 146. Hook for withdrawing indicator from seal-hole. IV.D.334. Approx. 1/2.

Report of the Canadian Arctic Expedition, vol. XII, page 113, describes also a less common "indicator" made from a strip of caribou leg sinew that was slit to hold a wisp of bird's down. Unfortunately I failed to collect a specimen of this object.

Foot-pad. In midwinter many sealers carried a small square pad of caribou fur, or preferably of polar bear fur, to place under their feet when watching over the seal holes. Like the wound pins and the scoop, it hung from the button at the back of the coat, whereas the knife and the seal indicator were usually carried in the hand with the harpoon. 225 [482]

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Skewers for Seals. To hold his extra harpoon head, the sealer attached to the button on the back of his coat a small bag made from seal or caribou skin, or from the foot or neck of some waterfowl such as a loon or a swan. Around the outside of this bag he sewed a narrow band of skin into which he inserted three or four bone skewers for closing the wound in the seal, and one or more bone toggles with short loops for dragging it home (Figure 147). The skewers,

Figure 147. Bag for spare harpoon head, skewers, and toggles. IV.D.719. 1/2.

though knobbed at the end like the skewers used for caribou meat, usually had a slightly different shape; for the caribou skewers, which penetrated only the flesh of the animal, not its skin, were rounded down to the point, whereas the sealing skewers (Figure 148*a*, which had to pass through the tough hide on both sides of the wound, were bevelled in such a way that they had at least two, and often four, cutting edges similar to those on a bone arrow head.

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Figure 148. Bone skewers for closing wounds in seals.
IV.D.719. 2/3.

Figure 149. Toggles for leading a dog.
IV.D.133. 1/2.

All sealers carried these bone skewers stuck in a strip of skin, but not all of them burdened themselves with a bag and a spare harpoon. Lacking the bag, they merely cut a hole in the strip of skin for slipping it over the coat button.

Toggle for Leading Dog. Figure 149 illustrates the usual toggle for leading a dog to the sealing ground. In principle it is the same as the toggle on the harness. The rigid parts are of bone, antler, or musk-ox horn; the cord and strap, of sealskin or caribou leg sinew. The broad loop hung over the sealer's wrist, and the small toggle buttoned into the loop at the end of the dog trace. There was no variation except in size, and no ornamentation.

Toggles for Hauling Seals. Toggles for hauling seals were indistinguishable from women's belt toggles (*See* page 50). Like most of the latter they were made of bone, antler, or musk-ox horn, nearly always the first, measured between 2½ and 4 inches from tip to tip, and had the shape of a crescent that tapered towards each end. Two ends of a short cord of sealskin, or more usually of plaited sinew, were passed through the hole and knotted to form a loop (Figure 150). The sealer threaded the toggle through a hole in the seal's mouth, passed it back through the loop and attached it to the trace of his dog, which then dragged the carcass home.

Sealing toggles, like other bone implements, were often ornamented with incised lines. These will be discussed in another place.

Figure 150. Toggle for hauling seals. IV.D.197. 1/2.

LAND HUNTING EQUIPMENT

Bows and Arrows

Most bows were made from three pieces of spruce wood, a middle piece and two "horns," joined together with the usual "cleft" or V splice (*Figure 151b*). Bows made from a single piece of wood were comparatively rare (Figure 151a), though one, owned by a 6-foot Tree River native, was stronger than any of the three-piece weapons. From the eastern end of Coronation Gulf came a few bows built up from musk-ox horn, caribou antler, or both materials combined (Figure 152), indicating a dearth of suitable wood in that region. In one of them, two pieces of musk-ox horn have been joined wth a cleft splice, but elsewhere in this bow, and in all other bows of horn or antler, the makers have used the less difficult scarfed splice, and strengthened it in places with copper or iron rivets. A few wooden bows have scarfed joints also, but they are mostly small weapons for women and children.

Because dry spruce has little tensility and easily fractures, every bow was strengthened with a score or more strands of braided sinew[1] that extended along the whole back and passed around the nocks (Figure 151). Some hunters

[1] One bow, a small one for a woman or child, has thongs of rawhide, presumably from want of sinew.

small birds, principally ptarmigan; hence these toggles were called *aqargiqiutit*: "ptarmigan appliances" (Figure 161).

A bone or musk-ox horn handle (*neruminaq*), fitted with a short strap of plaited sinew (Figure 162), was sometimes kept in the tool bag, but more often looped through some hole on the outside of the quiver or bow-case, or attached in some other way. Usually about 10 cm. long, of standardised shape, it was often grooved to fit the fingers in the same way as the blubber pounder and the whittling knife. This handle served on occasion to carry any small bundle, but was principally used for carrying the head of the caribou, or the bag containing its blood. From the latter use it acquired a second name, *augtun* or "blood carrier".

Figure 160. Toggles sewn to bow-case. *a* for attaching the carrying strap, *b* for attaching the quiver. IV.D.1053, 91. 1/1.

The tool bag was often closed by lacing, for which purpose one end of a short cord of sinew was attached to the edge of the bag, and the other end to a small bone needle with which it could be threaded through the holes. When completely furnished, it contained the following articles.

Two marline-spikes for the bow lashings; two twisters for the bow lashings; one or more spare wedges to go under the lashings; feathers for the arrows, kept usually in a small bag of marmot or other skin; a small board for trimming the feathers; a grooving tool for attaching the feathers; a little caribou back sinew for lashing the feathers, splicing the arrows, sewing rents in clothing, etc.; spare parts of arrows for repairs; bone skewers for the carcasses of game; bone pins for the bag that contained the caribou blood; a wrist guard; a drinking tube; a needle-case and needle; a mattock for making a hunting pit (if too large for the tool bag this was carried in the quiver or even in the bow-case); an arrow straightener.

Very few tool bags, however, contained all these articles. The natives nearly always hunted together, and the deficiencies of one bag could be supplied from another. On the other hand, the tool bag often contained other articles, such as the whittling knife and the graver for cutting bone, which were more usually stored in a special tool bag at home, with the adze and the bow-drill. The bow adjuster, being large and cumbersome, was also left in camp.

Marline-spikes. Marline-spikes (Figure 163), which averaged from 6 inches to 10 inches long, were made of caribou or musk-ox bone. Some closely resembled marrow spatulæ and, at times, were actually used for extracting marrow, but their larger size, heavier construction, and the small hole below the handle instead of at the extreme end distinguished them from the ordinary spatulæ. This hole enabled them to be lashed in pairs, because two were required to unfasten and tighten the back lashings of the bow. One cord often fastened together the two marline-spikes and the two twisters, which also went in pairs. The handles of marline-spikes were frequently grooved for the fingers on one edge, and sometimes on both. Ornamentation, however, was rare, and when it did occur, consisted merely of a few incised lines or the ring-and-dot pattern.

Figure 161. Bone toggle attached to either bow-case or quiver for pinning through ptarmigan wings. IV.D.1029. 1/1.

Twisters. The twisters (Figure 164) were much shorter than the marline-spikes to which they were usually attached, although they were made of the same material, and also used in pairs. All had the same unvarying shape, a flattened

[TEXT CONTINUED ON PAGE 131]

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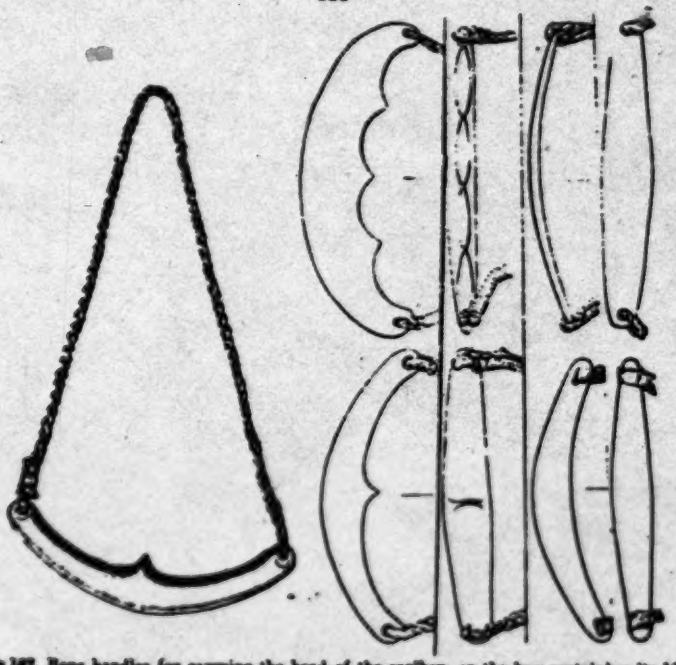

Figure 162. Bone handles for carrying the head of the caribou, or the bag containing its blood. IV.D.360, 198, 1438, 1360. 1/2.

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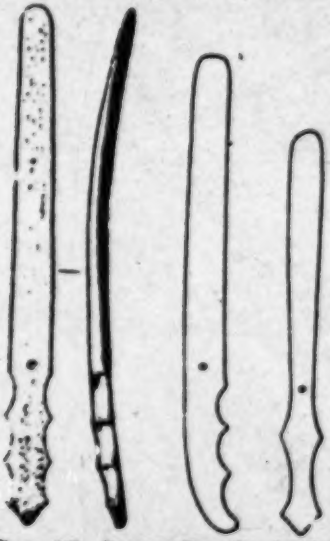

Figure 163. Bone marline-spikes for the bow lashings. IV.D.1508, 1229, 1510. 2/3.

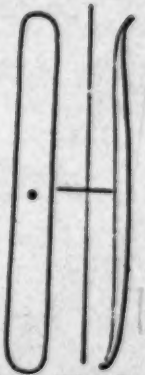

Figure 164. Bone twister for the bow lashings. IV.D.1226. 1/2.

stick 4 inches or so in length turned up at the ends in contrary directions, and with a small hole in the middle to lash them together. No ornamentation was observed on any of these implements.

Wedges. Figure 154 shows a typical wedge, a flat square of wood, bone, or rawhide for inserting under the back lashings of the bow. Some had holes through the middle so that they could be tied to the bow-case.

Figure 165. Wooden board for trimming arrow feathers. IV. D.162. 2/3.

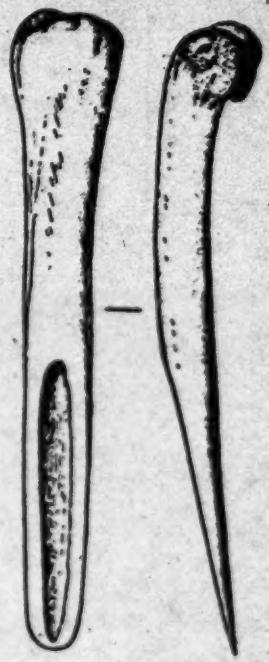

Figure 166. Bone instrument for feathering arrows. IV.D.1823. 1/1.

Board for Trimming Feathers (Figure 165). Any flat piece of wood served for trimming the feathers. The board in the tool bag was usually from 4 inches to 5 inches long and from 1 inch to 2 inches wide.

Grooving Tool. The grooving tool for attaching the feathers to the end of the arrow shaft was generally the hollow wing bone of a large bird bevelled off at one end like a chisel (Figure 166). Hunters who lacked a proper grooving tool sometimes used the marline-spike.

Spare Parts of Arrows. These consisted of broken shafts and heads that could be used in mending; scraps of bone or antler, and pieces of copper, to be worked up later into arrow heads.

Bone Skewers. The Copper Eskimo hunter had two sets of bone skewers, one for pinning up the carcass of the caribou, the other for closing the harpoon wounds in seals. It was only the former, which were usually a trifle longer and of slightly different shape, that he carried in the tool bag on his bow-case. Most of them were fashioned from caribou leg bone, and resembled rounded pencils

412 414 32 about 6 inches long that tapered to rather blunt points, and had rounded or conical knobs at their heads so that they could be fastened together in pairs, either tied with sinew or, more often, pushed through holes in a small strip of sealskin. If knobs were lacking, small holes were drilled for tying them together (Figure 167).

412 414 32 224 [415] *Bone Pins* (for the blood bag). The hunter generally collected the blood of the caribou in the reticulum of the stomach, which is shaped like a pouch. To close this pouch he carried in his tool bag two or three thin round pins of bone, rarely of wood, that ranged in length from 2½ inches to nearly a foot. The points were usually rather sharp so that they would penetrate the reticulum without tearing a large hole; and the heads were shaped in various ways, so that many blood pins were indistinguishable from the needles used to lace together the front of a tent (Figure 168). Some were quite plain, others had small knobs or were bevelled off like a marrow spatula; but a favourite form had two or even three projecting points, which were useful for keeping the mouth of the bag open when pouring the blood into it. Many hunters fastened their pins in pairs, like the meat skewers, the twisters, and the marline-spikes. A man who had no pins, tied inside the mouth of the blood bag a wooden plug such as is shown in Figure 169.

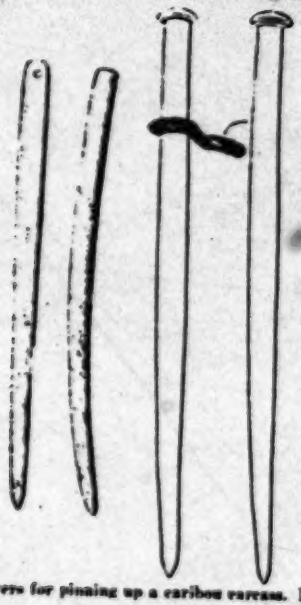

Figure 167. Bone skewers for pinning up a caribou carcass. IV.D.498, 1338. 1/2.

411 [531] [191] *Wrist Guard.* Archer's wrist guards (Figure 170) seemed to be universally of bone, and never to vary from an oval outline. The fine carving and engraving that appears on wrist guards east and west of this area was unknown to the Copper Eskimo, where one specimen was typical of all.

415 237 *Drinking Tube.* The drinking tube, though normally carried by the hunter only, was used by his entire family when travelling overland in summer with all its possessions. It was simply the hollow leg bone of some bird, usually a swan, not ornamented or marked by any special features. Many were indistinguishable from the needle-cases often found in the same tool bag (Figure 171).

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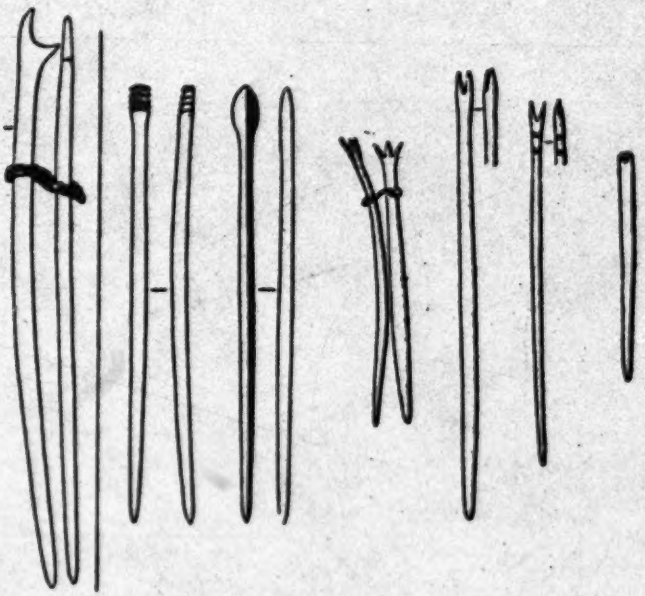

Figure 168. Bone pins for fastening the blood bag. IV.D.1648, 830, 221, 222, 1343, 1817, 690. 1/2.

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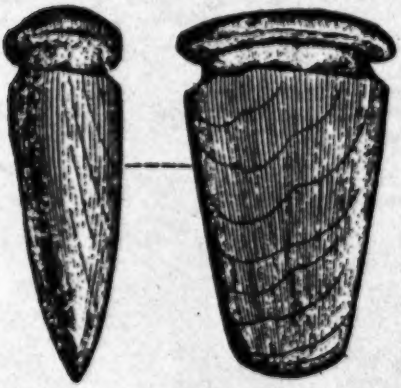

Figure 169. Wooden plug for closing the blood bag in the absence of a shower. IV.D.1651. 3/4.

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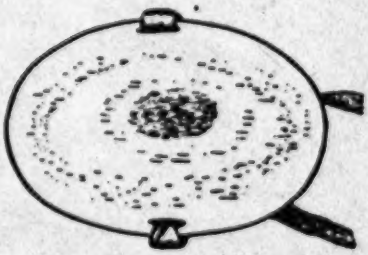

Figure 170. Archer's bone wrist guard, IV.D.586. 1/1.

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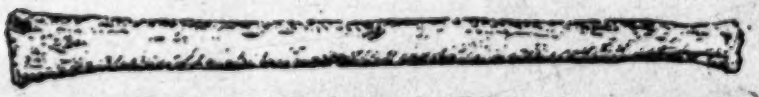

Figure 171. Bone drinking tube. IV.D.826. 1/1.

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Needle-case (*See* page 90). Rarely, as in Figure 157, this was attached to the bow-case.

Mattocks (*See* page 104).

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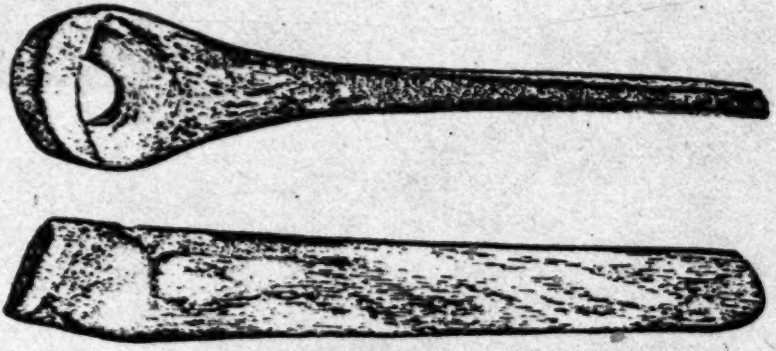

Figure 172. Arrow straightener. IV.D.216. Approx. 2/3.

Arrow Straightener and Bow Adjuster. Arrow straighteners are shown in Figures 172 and 173. Invariably they were made from bone or antler, and the hole through which the arrow shaft passed was bevelled at front and back. There was considerable variation in the shape of this hole; in some specimens it was almost circular, in others triangular; but the losenge form so characteristic of North Alaskan arrow straighteners seemed conspicuously absent. The specimen shown in Figure 173 is remarkable because its owner, by making the hole rectangular and slightly hollowing the front two corners, adapted his tool for straightening two shafts at the same time. In another specimen the hole is highly polished, suggesting that the implement may have served also for smoothing rawhide thongs. However, I never saw an arrow straightener employed for that purpose, although the Copper Eskimo, unlike their kinsmen in Hudson Bay, did not possess a special tool for smoothing thongs.

Figure 173. Arrow straightener, of antler. IV.D.156. Approx. 2/3.

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The bow adjuster (Figure 174) resembled the arrow straightener, but was necessarily much larger and for that reason made of wood. The slot was always rectangular, and it was bevelled on opposite sides, and on both faces, to produce

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two sharp edges, one of which was slightly higher than the other. One specimen had two slots, the lower more worn than the upper; probably the upper slot had proved unsatisfactory and the wood was large enough to permit a second. I have seen the Eskimo use this tool to adjust the horns of the bow, but it may conceivably have served also to regulate the curvature of the centre piece.

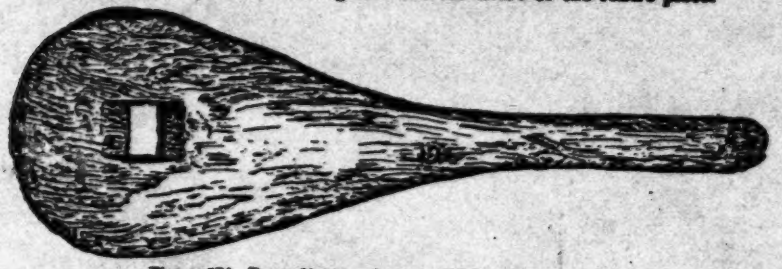

Figure 174. Bow adjuster, of wood. IV.D.34. Approx. 1/2.

Lances

Lances, which were used only for spearing caribou from the kayak, closely resembled one type of arrow. The long tang of the triangular copper blade was driven into a head of bone, or more usually antler, which was split at the base to form a socket for the end of the wooden shaft, and secured by copper rivets. A specimen is shown in Figure 175.

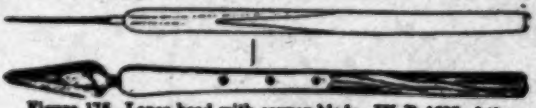

Figure 175. Lance head with copper blade. IV.D.1625. 1/4.

Besides the regular caribou lance, the natives often improvised crude lances for spearing marmots in their holes, and threw them away when the occasion passed. Figure 176 illustrates the head of one of these marmot lances made of antler; in use it was lashed to a walking-stick. The natives called it indifferently a "hook" (*nigsik*), or a "lance" (*kapu.n*).

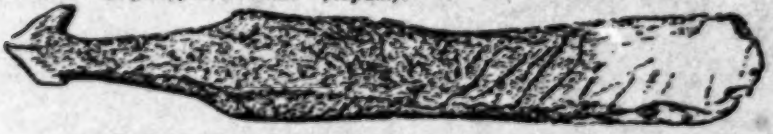

Figure 176. Crude bone point for spearing marmots. IV.D.378. 1/1.

The Copper Eskimo encountered bears so seldom that they did not develop any special weapon against them. Because they dreaded to meet the barren-ground grizzly at close quarters, they shot it with their bows and arrows; but against the polar bear they improvised lances by lashing their two-edged snow knives to long poles.

Sling and Bolas

Though children occasionally flung stones at birds with their tump-lines, the Copper Eskimo, strictly speaking, used neither the sling nor the bolas. They claimed, however, that both weapons were current among the inland Eskimo far to the southeast.

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ings for us, stand shyly inside the doorway, kicking their feet together restlessly as though knocking off the snow. Every one is tired after the day's journey, and as soon as the meal is ended strips off his clothes, tucks them under his head for a pillow, and glides into a sleeping-bag of caribou fur. Mrs. Light is the last to retire, for she still has some small duties to perform. She calls in the dogs from the passageway, one by one, throws them a few strips of blubber, and drives them out with the snow-duster, a short stick for beating the snow from our garments. Then she adjusts the lamp for the night, turns our boots and mittens so that they will dry on both sides, fits the snow-block into the doorway to keep out the cold air and the dogs, and slips quickly into her husband's "double" bag of caribou fur. Most of the inmates sleep with their mouths open, and their loud snores reverberating inside the hut drown the less resonant notes of the dogs in the passage.

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Leaving Putulik, I rejoined my late acquaintances on Victoria Island. The sun no longer climbed above the horizon, and the "day" was limited to the twilight hours from 9:30 A.M. to 2:30 P.M.; but a bright moon lit up the trail for me during the last three hours of the journey. The tribe was still living in the same settlement, for the women had not completed all the new fur clothes their families required during the winter months, and it would violate one of their most rigid taboos to finish the sewing on the sea-ice,

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rigid taboos to finish the sewing on the sea-ice. My old snow-hut was empty as I had left it, but cold and cheerless without the warm glow of a blubber-lamp. Seeking more comfort in an inhabited hut, I became the "guest" of a man named Snow-Knife, sharing my food with his family and giving them presents from time to time in payment for occupying half their dwelling. The arrangement proved fairly satisfactory for two or three weeks, but later in the winter I changed my quarters and lodged with another family more sensitive to my personal comfort than to my worldly possessions.

The women sewed industriously from morning till night, but the men found the time drag heavily. Some of them were still bringing in the caribou meat they had cached during the summer, and the pokes of blubber left on the coast in the spring. A few set fox-traps obtained the previous winter from Captain Bernard, the first and only trader who had visited their country. The rest stayed quietly at home and put their sealing-gear in order, or helped their wives to scrape the caribou hides.

In one hut that I visited a middle-aged Eskimo was trying to repair a 30.30 Winchester rifle he had purchased from Captain Bernard. A bullet had stuck in the barrel, for, like many a more civilized hunter, he had scrupulously oiled the outside of the weapon, but entirely neglected the inside. He hammered on the

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bullet with his ramrod; when that failed, he borrowed another rifle and fired a blank cartridge down the muzzle, while a crowd of natives stood around him to see the result. Fortunately there were no casualties; the chamber merely swelled to the size of a hen's egg and cracked. Then the man and his companions, thinking that the tempered steel might be malleable like the native copper they used for their tools, attempted to weld the crack by pounding on it with a heavy stone.

Hitherto I had escaped all friction with the natives; now came my first trouble. I was sitting in their largest hut, bartering knives, files, and cooking-pots for the usual museum specimens. A native offered to exchange a small horn drinking ladle for a twelve-inch butcher's knife, and I refused, since the knife was worth a dozen such ladles. He knew that all my companions were fifty miles away, and determined to take by force what he was unable to obtain through barter. He seized the knife, and I seized his wrist. In strength we were equally matched; he could not release his wrist, nor could I force the knife out of his fingers. The hut was crowded to suffocation with Eskimos, who made no attempt to take part in the struggle, but waited to see the issue. They had no chief, no one with authority to settle the case at strife; if my adversary won, the more lawless would band together and strip me of everything I had. The